Geschenk mit dem Nachlasse Zellers

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Descriptions of Australian Micro-Lepidoptera.

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VII. Revisional.

Before entering upon the larger families of the *Tineina* I have thought it best to correct such errors as I have hitherto discovered

in my previous papers, and to add descriptions of the new species which have in the meantime come into my possession. I have also rearranged on a proper system of classification the species of *Crambidæ*, *Phycidæ*, and allied families, which were classified at first without due appreciation of the value of the neuration as a guiding character; in my latter papers I have considered it of primary importance.

The investigation of the venation of the *Crambidæ* has revealed results of unexpected interest, such as would of themselves go far to confirm the importance which I attach to this subject. The venation of the extra-European genera does not seem to have been at all studied, and the genera are often distinguished by Zeller only on the most trifling and superficial characters; yet, so far as my material enables me to judge, they possess in the venation sharply-defined marks of distinction. Thus *Argyria* differs from *Crambus* in having veins 10 and 11 of the forewings stalked; *Prionopteryx* in having only 9 veins in the forewings and 7 in the hindwings; *Diptycophora* in having vein 11 of forewings running into 12 before costa; and so on, In *Diptycophora* I have examined nine of the thirteen known species, and found the venation constant. But the most interesting discovery has been the fact that almost the whole of the Australian species referred to *Crambus* have veins 8 and 9 of the forewings on a separate stalk, not rising out of 7, and therefore belong to the genus separated by Heinemann as *Thinasotia* Hb., represented in Europe by three or four species only, and not yet recognised elsewhere, except one species in New Zealand. In my opinion this conclusively proves the distinctness of the genus, which was previously doubtful. Consequent upon this is the remarkable fact that the true genus *Crambus* is virtually absent from the native Australian fauna, though universally present elsewhere, and numerously represented in New Zealand; I say virtually, for of the two Australian species one, *C. hapaliscus*, appears to have its home in Africa, and to have found its way

hither through Ceylon, thus not being truly aboriginal, whilst the other, *C. cuneiferellus*, being thus left a solitary exception, must be held insufficient to prove the native origin of the genus, since it is more probable that with extended knowledge it also will be found to be derived from elsewhere.

I have been obliged to create several new genera, principally in the *Phycidæ*, where the variation of structure is considerable; some of these will doubtless be found to occur elsewhere. For instance, it is possible that to *Ptochostola* should be referred the species of *Crambus* described by Zeller as having only three-branched median veins, *i.e.*, vein 5 absent in both wings; but as *Ptochostola* has other points of distinction, I can only conjecture the relationship; these species are *C. incanellus*, Z., and *C. pygmæus*, Z., (South America), *C. troglodytellus*, Snell., and *C. inconspicuellus*, Snell., (South Africa). Again, to the genus *Cateremna* is referable the European *Euzophera terebrella*, Zk.

The distinction between the families of the *Chilonidæ* and *Crambidæ*, as hitherto constituted, is utterly untenable. Heinemann makes the difference lie in the cell of the hindwings being closed in the *Chilonidæ* and open in the *Crambidæ*, but in at least half the genera of the *Crambidæ*, such as *Thinasotia*, *Diptychophora*, &c., the cell is very distinctly closed, and the character is proved merely a generic one. Zeller seems to rely rather on the *Chilonidæ* frequenting water-plants and the *Crambidæ* dry ground, surely a most unreliable and trivial point, and wholly inapplicable in practice. I consider that *Chilo* is by no means closely allied to *Schœnobius* and *Scirpophaga*, but that its points of resemblance are merely analagous and due to similarity of habit; and I have made the point of distinction between the two families consist in the pectination of the lower median vein of the hindwings, which is always present in the *Crambidæ*, and absent in *Schœnobius* and its allies; *Chilo* is therefore removed to the *Crambidæ*. This separation is in my opinion both natural and easy of application. Indeed, so near is *Chilo* to *Thinasotia*, that it was with difficulty

that I was enabled to separate them generally. The position of *Erotomanes* in the *Schœnobiadæ* may excite surprise, but the superficial appearance of the only species is peculiar anywhere, and in structure it agrees so nearly with *Schœnobius* that I was puzzled to find satisfactory distinctions.

The *Crambidæ* being found to have sometimes as few veins as any of the *Phycidæ*, the distinction of these families cannot be based on any one character, but will be readily granted on a consideration of the sum of characters given, by which any species can be with ease correctly referred; the maxillary palpi afford the best single test known to me.

I give now the classified catalogue of the Australian species of these families, with accurate diagnoses of all the genera, both old and new. It should be understood that the veins are assumed to be all separate, unless otherwise stated. The New Zealand species are not included, as they are in course of publication elsewhere.

I am of opinion that in the *Schœnobiadæ* must also eventually be included some genera usually classed with the *Botydæ*, such as *Scoparia*, but as I have not yet finished my investigations, I forbear to do more than mention the possibility, since it would in no way interfere with the system here given.

Fam. I. SCHŒNOBIADÆ.

Labial palpi porrected. Maxillary palpi triangular, porrected, conspicuous. Forewings with 12 veins, 1 simple, 7 separate, 8 and 9 stalked. Hindwings with 8 veins, 3, 4, 5, rising near together, not stalked, 7 and 8 stalked, lower median not pectinated at base.

Gen. 1. Scirpophaga, Tr.

Antennæ of male half as long as forewings, ciliated, of female much shorter. Labial palpi short, not much longer than head. Abdomen very elongate, in female with dense anal tuft.

exsanguis, n. sp. *ochroleuca*, n. sp.

Gen. 2. Schœnobius, Dup.

Antennæ of male half as long as forewings, crenulate, ciliated, of female much shorter. Labial palpi elongate, much exceeding head, attenuated. Abdomen elongate, in female with dense anal tuft.

imparellus, Meyr., Vol. III., 176.

Gen. 3. Erotomanes, n. g.

Antennæ of male half as long as forewings, slender, pubescent, of female equally long. Labial palpi elongate, much exceeding head, broadly haired. Abdomen in male elongate, stout, in female shorter, anal extremity laterally compressed, not tufted.

mirabilella, Meyr., Vol. III., 213, IV., 333.

Fam. II. CRAMBIDÆ.

Labial palpi porrected. Maxillary palpi triangular, porrected, conspicuous. Forewings with 12 (rarely 11, 10, or 9) veins, 1 simple, normal veins 8 and 9 stalked, 7 sometimes from same stalk. Hindwings with 8 (rarely 7) veins, 4 and 5 often stalked, normal veins 7 and 8 stalked, lower median pectinated at base.

Gen. 1. Chilo, Zk.

Antennæ of male finely ciliated. Labial palpi very long, attenuated. Forewings with 12 veins, 8 and 9 stalked. Hindwings with 8 veins, 4 and 5 from a point, 6 very closely approximated at origin to 7, 7 and 8 stalked, cell closed.

parramattellus, Meyr., Vol. III., 178.
leptogrammellus, Meyr., Vol. IV., 207.

Gen. 2. Crunophila, n. g.

Antennæ of male stout, strongly pectinated. Labial palpi very long, attenuated. Forewings with 12 veins, 8 and 9 stalked. Hindwings with 8 veins, 4 and 5 from a point, 6 very closely approximated at origin to 7, 7 and 8 stalked, cell closed.

ramostriella, Walk., Vol. IV., 207 (*schistellus*).

Gen. 3. Thinasotia, Hb.

Antennæ of male finely ciliated, rarely pectinated. Labial palpi long, attenuated. Forewings with 12 veins, 8 and 9 stalked. Hindwings with 8 veins, 4 and 5 stalked or from a point, 6 widely remote at origin from 7, 7 and 8 stalked. cell closed,

milvella, Meyr., Vol. III., 181.
recurvella, Walk., Vol. III., 186 (*bivittellus*).
bivittella, Don., Vol. III., 185 (*trivittatus*).
aurantiaca, Meyr., Vol. III., 184.
bifractella, Walk., Vol. III., 197.
argyroëles, n. sp.
pleniferella, Walk., Vol. III., 187.
impletella, Walk., Vol. IV., 210.
longipalpella, Meyr., Vol. III., 196.
hoplitella, Meyr., Vol. III., 188.
perlatalis, Walk., Vol. IV., 213.
relatalis, Walk., Vol. III., 191.
panselenella, n. sp.
opulentella, Z., Vol. III., 192.
grammella, Z., Vol. III., 194 (*enneagrammos*).
invalidella, Meyr., Vol. III., 193.
acontophora, n. sp.
torrentella, Meyr., Vol. III.. 183.
lativittalis, Walk., Vol. III., 183.

Gen. 4. Diptychophora, Z.

Antennæ of male very finely ciliated. Labial palpi rather short, somewhat triangular. Forewings with hindmargin twice indented on upper half; with 12 veins, 8 and 9 stalked, 11 coalescing with 12 before costa. Hindwings with 8 veins, 5 from above angle, 6 moderately approximated to 7, 7 and 8 stalked, cell closed.

præmaturella, Meyr., Vol. III., 198.

Gen. 5. ARGYRIA, Hb.

Antennæ of male finely ciliated. Labial palpi moderate or rather long, attenuated. Forewings with 12 veins, 8 and 9 stalked, rising out of 7, 10 and 11 stalked. Hindwings with 8 veins, 4 and 5 stalked, 6 closely approximated at base to 7, 7 and 8 stalked, cell open.

argyraspis, Vol. IV., 216.

Gen. 6. ANCYLOLOMIA, Hb.

No tongue. Antennæ of male dentate or strongly pectinated. Labial palpi very long, attenuated. Forewings with 12 veins, 8 and 9 stalked, rising out of 7. Hindwings with 8 veins, 4 and 5 almost from a point, 6 widely remote at origin from 7, 7 and 8 stalked, cell closed.

Westwoodi, Z., Vol. IV., 208.

Gen. 7. CRAMBUS, F.

Antennæ of male finely ciliated, rarely pectinated Labial palpi very long, attenuated. Forewings with 12 veins (rarely 11 through obsolescence of vein 9), 8 and 9 stalked, rising out of 7. Hindwings with 8 veins, 4 and 5 usually stalked or from a point, 6 approximated at base to 7, 7 and 8 stalked, cell open.

hapaliscus, Z., Vol. III., 182 (*concinnellus*).
cuneiferellus, Walk., Vol. III., 189.

Gen 8. PTOCHOSTOLA, n. g.

Antennæ of male finely ciliated. Labial palpi very long, attenuated. Forewings with 10 veins, 6 and 7 stalked, 6 to below apex, 9 coalescing with 10 before costa. Hindwings with 7 veins, 4 from angle of cell, 5 closely approximated at base to 6, 6 and 7 stalked, cell open.

dimidiella, Meyr., Vol. III , 190,

Gen. 9. Prionopteryx, Stph.

Antennæ of male finely ciliated. Labial palpi rather long, hardly attenuated. Forewings with hindmargin once indented above middle; with 9 veins, 6 and 7 stalked, 6 running to costa. Hindwings with 7 veins, 3 and 4 from a point, 5 remote at origin from 6, 6 and 7 stalked, cell closed.

apicistrigella, Meyr., Vol. IV., 209.

Fam. III. PHYCIDÆ.

Labial palpi porrected or recurved. Maxillary palpi pencil-like or usually filiform, generally concealed, sometimes absent. Forewings with 11 (rarely 13 or 9) veins, 1 simple, normal veins 7 and 8 stalked. Hindwings with 8 or 7 veins, 4 and 5 usually stalked, 3 sometimes from same stalk, normal veins 7 and 8 stalked, lower median pectinated at base.

Gen. 1. Ceroprepes, Z.

Antennæ of male strongly pectinated on one side, towards apex simple, with a small tooth of scales on basal joint, and a small thickened tubercle above it. Labial palpi moderate, curved, ascending. Maxillary palpi short, filiform. Forewings with 11 veins, 7 and 8 stalked. Hindwings with 8 veins, 4 and 5 stalked, 7 and 8 stalked.

almella, Meyr., Vol. III., 210.

Gen. 2. Myelois, Z.

Antennæ of male finely ciliated. Labial palpi moderate, curved, ascending. Maxillary palpi short, filiform. Forewings with 11 veins, 7 and 8 stalked. Hindwings with 8 veins, 4 and 5 from a point (or stalked in extra-Australian species), 7 and 8 stalked.

œnobarella, Meyr., Vol. IV., 228.

Gen. 3. EUZOPHERA, Z.

Antennæ of male very finely ciliated. Labial palpi moderate, curved, ascending. Maxillary palpi short, filiform. Forewings with 11 veins, 4 and 5 stalked, 7 and 8 stalked. Hindwings with 7 veins, 3 and 4 stalked, 6 and 7 stalked.

cosmiella, Meyr., Vol. III., 212.

Gen. 4. CATEREMNA, n. g.

Antennæ of male very finely ciliated. Labial palpi moderate, curved, ascending. Maxillary palpi short, filiform. Forewings with 11 veins, 7 and 8 stalked. Hindwings with 7 veins, 3 and 4 stalked, 6 and 7 stalked.

leucarma, Meyr., Vol. IV., 230.
subarcuella, Meyr., Vol. III., 211.
microdoxa, Meyr., Vol. IV., 231.

Gen. 5. ZOPHODIA, Hb.

Antennæ of male dentate, strongly ciliated. Labial palpi long, straight, porrected. Maxillary palpi minute, filiform. Forewings with 11 veins, 4 and 5 stalked, 7 and 8 stalked. Hindwings with 7 veins, 3 and 4 stalked, 6 and 7 stalked.

neotomella, Meyr., Vol. IV., 226.
ensiferella, Meyr., Vol. III., 208.

Gen. 6. EUCARPHIA, Hb.

Antennæ of male finely ciliated. Labial palpi long, straight, porrected. Maxillary palpi obsolete. Forewings with 11 veins, 7 and 8 stalked. Hindwings with 8 veins, 4 and 5 stalked, rising out of 3, 7 and 8 stalked.

vulgatella, Meyr., Vol. III., 207,
cnephæella, Meyr., Vol. IV., 227.

*Gen. 7. ETIELLA, Z.

Antennæ of male finely ciliated, strongly sinuate above base, with a large tuft of scales in sinuation. Labial palpi long, straight,

porrected, terminal joint long, exposed. Maxillary palpi in male long, pencil-like, in female short, filiform. Forewings with 11 veins, 7 and 8 stalked. Hindwings with 8 veins, 4 and 5 stalked, 7 and 8 stalked.

sincerella, Meyr , Vol. III., 204.
chrysoporella, Meyr., Vol. III., 206.
Behrii, Z., Vol. III., 205.

Gen. 8. Salebria, Z.

Antennæ of male dentate, finely ciliated, with a tuft of scales in sinuation at base. Labial palpi moderate, curved, ascending, terminal joint short. Maxillary palpi in male long, pencil-like, in female short, filiform. Forewings with 11 veins, 7 and 8 stalked. Hindwings with 8 veins, 4 and 5 stalked, rising out of 3, 7 and 8 stalked.

eucometis, n. sp.
rufitinctella, Meyr., Vol. III., 203.
oculiferella, Meyr., Vol. IV., 222.
digrammella, Meyr., Vol. IV., 223.
caliginosella, Meyr., Vol. IV., 221.
strigiferella, Meyr , Vol. III., 202, IV., 221.

Gen. 9. Pempelia, Hb.

Antennæ of male dentate, finely ciliated, with a tuft of scales in sinuation at base. Labial palpi moderate, curved, ascending, terminal joint short. Maxillary palpi in male pencil-like, in female short, filiform. Forewings with 11 veins, 7 and 8 stalked. Hindwings with 7 veins, 3 and 4 stalked, 6 and 7 stalked.

opimella, Meyr., Vol. III., 201.

Gen, 10. Lasiocera, Meyr.

Antennæ of male with basal half thickly clothed above with rough scales. Labial palpi moderate, curved, ascending. Maxillary palpi short, filiform. Forewings with 11 veins, 7 and

8 stalked. Hindwings with 7 veins, 3 and 4 stalked, 6 and 7 stalked.

canilinea, Meyr., Vol. III., 209.

Gen. 11. Trissonca, n. g.

Antennæ of male finely ciliated, with three small projecting teeth above near base. Labial palpi moderate, curved, ascending. Maxillary palpi short, filiform. Forewings with 11 veins, 7 and 8 stalked. Hindwings with 7 veins, 3 and 4 stalked, 6 and 7 stalked.

mesactella, Meyr., Vol. IV., 225.

Gen. 12. Ampycophora, n. g.

Antennæ of male dentate, ciliated, with a tuft of scales in sinuation at base. Labial palpi moderate, curved, ascending. Maxillary palpi in male pencil-like, in female short, filiform. Forewings with 10 veins, 6 and 7 stalked. Hindwings with 7 veins, 3 and 4 stalked, 6 and 7 stalked.

apotomella, Meyr., Vol. IV., 224,

Gen. 13. Heosphora, n. g.

Antennæ of male dentate, ciliated, with a tuft of scales in sinuation at base. Labial palpi very long, straight, porrected, terminal joint concealed. Maxillary palpi obsolete. Forewings with 10 veins, 7 and 8 stalked, rising out of 6. Hindwings with 7 veins, 3 and 4 stalked, 6 and 7 stalked.

virginella, Meyr., Vol. IV., 233.
psamathella, Meyr., Vol. IV., 234.

Gen. 14. Crocydopora, n. g.

Antennæ of male dentate, finely ciliated, with a tuft of scales in sinuation at base. Labial palpi rather long, stout, porrected, terminal joint short. Maxillary palpi obsolete. Forewings with

10 veins, 6 and 7 stalked. Hindwings with 7 veins, 3 and 4 stalked, 6 and 7 stalked.

stenopterella, Meyr., Vol. III., 200.

Gen. 15. Hypophana, n. g.

Antennæ of male very finely ciliated, with a tuft of scales in sinuation at base. Labial palpi moderate, slender, recurved, ascending. Maxillary palpi short, filiform. Forewings with 11 veins, 7 and 8 stalked. Hindwings with 8 veins, 4 and 5 stalked, sometimes rising out of 3, 7 and 8 stalked.

euraphella, Meyr., Vol. IV., 217.
infusella, Meyr., Vol. IV., 218.
melanostyla, Meyr., Vol. IV., 220.
petalocosma, n. sp.

Gen. 16. Eucampyla, n. g.

Antennæ of male finely ciliated, with a short acute tooth on basal joint above. Labial palpi moderate, slender, porrected. Maxillary palpi short, filiform. Forewings with 11 veins, 4 and 5 stalked, 7 and 8 stalked. Hindwings with 7 veins, 3 and 4 rising near together, 6 and 7 stalked.

etheiella, n. sp.

Gen. 17. Homoeosoma, Curt.

Antennæ of male finely ciliated, with a short notch above basal joint. Labial palpi moderate, slender, somewhat ascending. Maxillary palpi short, filiform. Forewings with 11 veins (or in extra-Australian species 10 through obsolescence of vein 8), 4 and 5 stalked, 7 and 8 stalked. Hindwings with 7 veins, 3 and 4 rising nearly from a point, 6 and 7 stalked.

vagella, Z., Vol. III., 214.
fornacella, Meyr., Vol. IV., 219.

Gen. 18. Anerastia, Hb.

Antennæ of male pubescent or finely ciliated. Labial palpi long or moderately long, porrected or ascending. Maxillary palpi short, filiform. Forewings with 10 veins, 6 and 7 stalked. Hindwings with 7 veins, 3 and 4 stalked, 6 and 7 stalked.

distichella, Meyr., Vol. III., 215.

Gen. 19. Ephestia, Gn.

Antennæ of male pubescent. Labial palpi moderate, curved, ascending. Maxillary palpi short, filiform. Forewings in male with a tuft of hairs beneath folded base of costa; with 9 separate veins. Hindwings with 7 veins, 3 and 4 rising near together or from a point, 6 and 7 stalked.

sericaria, Scott., Vol. IV., 235.
elutella, Hb., Vol. III., 215.
ficulella, Barr., Vol. IV., 234.
interpunctella, Hb., Vol. III., 216.

Fam. IV. GALLERIDÆ.

Labial palpi differing in sexes, porrected or ascending. Maxillary palpi minute, concealed. Forewings with 12 (rarely 11 or 10) veins, 1 furcate at base, normal veins 7 and 8 stalked, 9 usually from same stalk. Hindwings with 8 or 7 veins, 4 and 5 stalked or coincident, normal veins 7 and 8 stalked, lower median pectinated at base.

Gen. 1. Galleria, F.

Antennæ with a tooth of scales on basal joint, in male very finely ciliated. Labial palpi in male moderate, ascending, in female moderate, porrected. Forewings with hindmargin obtusely projecting above anal angle; with 12 veins, 7 and 8 stalked, rising out of 9. Hindwings in male with 8 veins, 4 and 5 stalked, rising out of 3, 7 and 8 stalked; in female with 7 veins, 3 and 4 stalked, 6 and 7 stalk.

mellonella, L., Vol. III., 216.

Gen. 2. Callionyma, n. g.

Antennæ with a tooth of scales on basal joint, in male very finely ciliated. Labial palpi in male short, ascending, in female rather long, porrected. Forewings with 12 veins, 8 and 9 stalked, rising out of 7. Hindwings with 8 veins, 4 and 5 stalked, 7 and 8 stalked.

sarcodes, n. sp.

Gen. 3. Aphomia, Hb.

Antennæ with or without a tooth of scales on basal joint, in male pubescent. Labial palpi in male short, ascending, in female rather long, porrected. Forewings with 12 veins, 4 and 5 sometimes stalked or in male obsolete, 8 and 9 stalked or near together, rising out of 7. Hindwings with 7 veins, 3 and 4 stalked, 6 and 7 stalked.

tripartitella, Meyr., Vol. IV., 236.
pachytera, Meyr., Vol. IV., 227.
latro, Z., Vol IV , 238.

Gen. 4. Achroea, Hb.

Antennæ with a tooth of scales on basal joint, in male pubescent. Labial palpi in male short, ascending, in female very short, porrected. Forewings with 11 veins, 4 and 5 stalked, 7 and 8 stalked. Hindwings with 7 veins, 3 and 4 stalked, 6 and 7 stalked.

grisella, F., Vol. III., 216.

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In the following notes the changes of specific nomenclature made in this list are explained, and the new species included are described.

Scirpophaga, Tr.

Scrip. exsanguis, n. sp.

♂ ♀. 8″-11½″. Head, palpi, antennæ, thorax, abdomen, and legs snow-white ; palpi more or less infuscated at base externally,

sometimes very slightly, sometimes second joint entirely fuscous externally; abdomen sometimes faintly infuscated, anal tuft pure white; legs dark fuscous beneath, posterior tibiæ sometimes slightly infuscated above. Forewings moderately broad, costa arched, more strongly towards apex, hindmargin strongly rounded, moderately oblique; snow-white, slightly shining. Hindwings snow-white, slightly shining. Forewings beneath in male moderately infuscated, in female nearly white.

Amongst described species this seems to come nearest to *Scirp. virginea*, Z., from South Africa, from which it appears to differ principally by the legs being white above and dark fuscous below, and by the infuscated under-surface of the forewings; but I have not seen Zeller's species. The colouring of the palpi seems variable and unreliable.

Very common round Sydney in March, sitting sluggishly on the stems of rushes in swampy places, and also taken at Brisbane in September; there can be little doubt that the larva feeds in the stems of a *Juncus*.

Scirp. ochroleuca, n. sp.

♂. 10″-11″. Head, palpi, antennæ, thorax, abdomen and legs white, faintly and unevenly ochreous-tinged; antennæ of male not half as long as forewings; anal tuft ochreous-whitish; legs, ochreous-white beneath. Forewings slightly narrower than in *S. exsanguis*, costa gently arched, hindmargin moderately oblique, strongly rounded; ochreous-white, becoming pure white towards apex. Hindwings ochreous-white, becoming pure white towards apex. Forewings beneath ochreous-white.

Certainly distinct from the preceding, though the female is yet unknown; readily distinguished from it by the wholly ochreous-white legs, and absence of infuscation on lower surface of forewings, as well as by the shorter antennæ and general ochreous tinge.

Two specimens sent from near Duaringa, Queensland, by Mr. G. Barnard.

CRUNOPHILA, n. g.

Crun. ramostriella, Walk.

(*Crambus ramostriellus*, Walk., Brit. Mus. Cat. 172; *Ubida receptalis*, ibid. 186; *Chilo schistellus*, Meyr., Proc. Linn. Soc., N.S.W., IV., 207.)

15″-21″. The male only differs from the female in the slightly broader forewings, and in having the hindwings smoky-fuscous, except towards the base, which is white. The species varies somewhat in depth of colouring, being often broadly suffused with brownish-whitish towards dorsal margin; thorax also often suffused with whitish; infuscation of hindwings in female variable in extent.

Several specimens sent by Mr. G. Barnard from near Duaringa, Queensland.

THINASOTIA, Hb.

Thin. bivittella, Don.

Prof. Zeller now informs me that his identification of this species, which I accepted, was erroneous, the description in reality referring to the insect described by him as *Cr. trivittatus*; so that for the Western Australian species the name of *recurvellus*, Walk., must be adopted. The synonymy of these two species will therefore be as follows:

Thin. bivittella, Don.

Crambus bivittellus, Don., Walk.; *C. trivittatus*, Z., Meyr.

Thin. recurvella, Walk.

Crambus recurvellus, Walk.; *C. bivittellus*, Z., Meyr.

Thin argyrcëles, n. sp.

♂. 9″. Head pale ochreous, with a dark fuscous spot on middle of forehead, another between antennæ, and one on anterior

margin of eye. Maxillary palpi pale ochreous, with two black bands. Labial palpi rather short, greyish-ochreous, mixed with blackish on sides, beneath ochreous-white at base. Antennæ dentate, shortly ciliated, dark fuscous. Thorax light brownish-ochreous, anterior margin with four dark fuscous spots. Abdomen pale ochreous. Anterior tibiæ with basal half greyish-ochreous, terminal half suffusedly blackish, tarsi black with ochreous-whitish basal and apical rings on each joint; middle tibiæ white, base black, posterior tibiæ wholly white, middle and posterior tarsi dark fuscous-grey with whitish rings at apex of joints. Forewings rather short, moderately broad, costa very slightly arched, apex obtuse, hindmargin distinctly sinuate, rather oblique, light yellowish-ochreous, becoming ochreous-brown along costa and on anterior half of disc, more greyish-tinged towards anterior half of inner margin; a few scattered black scales on anterior half of wing; a moderately broad silvery-white partially black-margined longitudinal streak immediately beneath costa from near base to slightly beyond middle, posterior extremity bent somewhat down, obtuse, anterior extremity acutely attenuated, somewhat suffused, almost touching costa; an irregular elongate-oval silvery-white spot a little below costa about two-thirds; a smaller roundish silvery-white subapical spot, not touching hind-margin, its upper angle suffusedly produced into apex; a moderately broad straight silvery-white black-margined longitudinal streak through disc from base to slightly beyond middle, slightly attenuated towards base; an elongate-oval silvery-white spot in disc below middle about two-thirds from base; a leaden-metallic line starting from between subcostal and median white streaks at one-fourth from base, running round posterior extremity of median streak, and curving back to inner margin somewhat before middle; an irregular leaden-metallic spot between subcostal streak and subcostal white spot; a similar leaden-metallic spot between anterior extremities of subcostal and discal white spots; the ground colour between subcostal and discal white spots, and

between discal white spot and inner margin, is thickly strewn with black scales; an ill-defined whitish-ochreous mark on costa at two-thirds; a similar mark on costa at three-fourths, giving rise to an outwardly curved leaden-metallic line passing round posterior extremities of subcostal and discal white spots, and ending on inner margin at about four-fifths; three sharply marked round black spots on hindmargin above anal angle; a black line on hindmargin beneath apex: cilia smoky-grey, with a broad leaden-metallic basal line with violet reflections, becoming white at apex. Hindwings with a tuft of long whitish-yellowish hairs on costa towards base above; yellowish-whitish, more yellowish on costal half, with a roundish cloudy fuscous-grey spot at apex; cilia yellowish-whitish.

Nearly allied to *T. bifractella*, Walk., but readily known by the different shape and detachment from costa of the subcostal white spot, by the different course of the first metallic line which is curved obliquely inwards to inner margin, instead of being perpendicular to it, by the darker ground colour, metallic basal line of the cilia, and various other minute points, as well as the costal tuft and whitish-yellow colour of the hindwings, which latter are perhaps only sexual characteristics.

A very handsome species; one very perfect specimen taken near Brisbane at the end of September.

Thin. relatalis, Walk.

The description of *Crambus argyroneurus*, Z., Cr., 47, certainly refers to this species, and, being slightly later, Zeller's name must rank as a synonym only. I should have identified it before, but for a misunderstanding of the wording of the original description.

Thin. panselenella, n. sp.

♂ ♀. 13‴-14½‴. Head brownish-ochreous, face darker, with an ochreous-whitish spot on anterior margin of eyes. Maxillary

palpi light ochreous, towards base externally dark fuscous. Labial palpi very long, greyish-ochreous mixed with dark fuscous, beneath white at base. Antennæ dark fuscous, basal joint ochreous-whitish. Thorax light ochreous, shoulders ochreous-brown, centre of back black, with a longitudinal white stripe on each side of back, not reaching anterior margin. Abdomen light ochreous-yellow. Legs dark fuscous, posterior tibiæ light ochreous above. Forewihgs moderately broad, costa gently arched, apex obtusely pointed, hindmargin slightly sinuate. moderately oblique; ochreous-brown, darkest on disc, becoming light brownish-ochreous towards inner and hindmargins; extreme costal edge white from one-fourth almost to apex, a very slender snow-white streak immediately beneath costa from near base almost to middle; a straight narrow snow-white longitudinal streak running from a little below costa at one-fourth to costa immediately before apex, anterior extremity finely attenuated, upper edge tending to emit slender streaks to costa posteriorly; a moderate nearly straight snow-white central longitudinal streak through disc from base to hindmargin, margined with dark fuscous, somewhat sinuate beyond middle, slightly attenuated at base; from its lower edge beyond middle proceed three slender ill-defined white streaks to hindmargin at equal distances; a variable elongate-wedge-shaped ill-defined white longitudinal streak immediately above posterior fourth of median streak, sometimes more clearly marked, anteriorly finely attenuated; above this sometimes an ill-defined irregular white spot on hind-margin; between the white streaks posteriorly are cloudy dark fuscous lines; beneath third branch of median streak is a slender ill-defined white streak from middle to hindmargin, not touching median streak; a straight slender cloudy white streak from base to anal angle, and another from base to inner margin at one-third; a clearly-marked blackish hindmarginal line: cilia pale ochreous-grey, with a snow-white basal line. Hindwings pale dull ochreous-yellow, in female somewhat infuscated towards

hindmargin; a fuscous-grey hindmarginal line, in female darker and sharply marked; cilia pale ochreous-yellow.

Closely allied to *Thin. opulentella*, Z., which it nearly resembles in markings, differing especially by the yellow hindwings and darker ground colour, which contrast handsomely with the snow-white markings; it is also somewhat larger, and is therefore the largest species of this group.

Five specimens taken at Blackheath in the Blue Mountains, at an elevation of 3,500 feet, at the end of February, in dry grassy places.

Thin. grammella, Z.

Prof. Zeller, to whom I sent specimens of the species described by me as *Cr. enneagrammos* (Proc. Linn. Soc. N.S.W., III., 194), assures me that it is identical with his *grammellus*, which name must therefore be adopted for the species. Zeller's original type would seem to have been a slight variety.

Thin. acontophora, n. sp.

♂ ♀. $10\frac{1}{4}''$-$11\frac{1}{4}''$. Head ochreous-white, centre of forehead and collar brownish-ochreous. Maxillary palpi white, externally except at apex ochreous mixed with dark fuscous. Labial palpi very long, ochreous mixed with dark fuscous, internally and beneath white. Antennæ whitish-ochreous. Thorax whitish-ochreous, becoming brownish-ochreous on shoulders and anterior margin. Abdomen pale whitish-ochreous. Legs pale whitish-ochreous, anterior pair ochreous-fuscous internally. Forewings rather short, moderately broad, costa rather strongly and evenly arched, apex almost acute, hindmargin sinuate, rather strongly oblique; pale whitish-ochreous, sometimes slightly tinged with brownish-ochreous, especially towards base of costa, and with a few scattered black scales; a narrow white central longitudinal streak through disc from base nearly to hindmargin, towards base very finely attenuated, posteriorly very suffused and

indistinct, lower margin ill-defined, upper margin edged by a blackish line, above which is a cloudy dark fuscous streak, broadest in middle and attenuated towards base, posteriorly bending upwards near hindmargin and continued suffusedly to apex of wing, where it becomes again more distinct; a round blackish dot on lower margin of white median streak at two-thirds from base, and sometimes another a little above it; a whitish suffusion along hindmargin, and sometimes confused indications of slender whitish streaks on veins towards lower half of hindmargin; a hindmarginal row of black dots; cilia ochreous-whitish, with two cloudy fuscous-grey lines. Hindwings ochreous-grey-whitish, with a grey hindmarginal line; cilia ochreous-whitish.

Nearly allied to *T. grammella*, Z., and *T. invalidella*, Meyr., but differing from both in the absence of the white subcostal streak, and the obsolescence of the branches of the median streak; the hindwings are lighter than in *T. grammella*, but not white as in *T. invalidella*.

Five specimens taken in March in dry grassy places at Mittagong, New South Wales, at an elevation of 2,000 feet.

Crambus hapaliscus, Z.

This name, originally published by Zeller (Lep. Caffr.) in 1852, has the priority of *concinnellus*, Walk.; on account of the description being taken from South African specimens I had overlooked the identity, which is undoubted.

SALEBRIA, Z.

Sal. eucometis, n. sp.

♂. 11″. Head, palpi, antennæ, and thorax light ochreous, somewhat suffused with brownish; maxillary palpi yellowish. Abdomen light greyish-ochreous, somewhat irregularly brownish-tinged. Legs dark fuscous, middle tibiæ brownish-ochreous, posterior tibiæ light ochreous above. Forewings elongate,

moderate, costa moderately and evenly arched, apex obtuse, hindmargin straight, moderately oblique; light ochreous, rather thickly but irregularly irrorated with light reddish-fuscous scales, especially immediately beneath the median streak and along hindmargin; costal edge suffusedly dark fuscous; a straight longitudinal ochreous-white streak a little above middle from base to hindmargin beneath apex, tolerably broad in middle, attenuated to both extremities, lower margin tolerably well-defined, upper margin very suffused and indistinct; cilia fuscous-grey, with whitish points. Hindwings fuscous-grey, slightly purplish tinged; a dark grey hindmarginal line: cilia whitish grey, with a darker grey line near base.

The ochreous-white median streak distinguishes this species from all others.

One specimen taken at Brisbane in September, in a dry grassy place.

PEMPELIA, Hb.

Pemp. opimella, Meyr.

The maxillary palpi of the male in this species appear to have but an apology for the usual pencil of hairs, so that it is somewhat doubtful whether the species is justly included in this genus, with which it fully agrees in other respects.

HYPOPHANA, n. g.

I have no doubt of this genus being a natural one. The species are all rather inconspicuous grey insects, with notably transparent hindwings.

Hyp. petalocosma, n. sp.

♂. $7\frac{3}{4}''$. Head and thorax light grey, somewhat mixed with whitish. Palpi grey, towards base whitish, terminal joint and a subapical band on second joint suffusedly dark fuscous. Antennæ grey. Abdomen whitish-grey, prismatic. Legs grey-whitish,

anterior pair suffused with dark fuscous above. Breast beneath on each side with a broad expansible pearly prismatic plate, composed of about a dozen oblong overlapping plates, behind which is an expansible tuft of thick ochreous-white hair-scales, resting on a circular patch of overlapping deep black plate-like scales; a short linear patch of black scales also extends along base of submedian fold on under-side of forewings. Forewings very narrow at base, gradually dilated posteriorly, costa at first straight, towards apex moderately arched, apex obtusely rounded, hindmargin rather strongly rounded, not oblique; light grey, slightly brownish-tinged, with irregularly scattered dark fuscous scales; a cloudy dark fuscous transverse mark at one-fourth, not reaching costa or inner margin; a very faint slender irregular dark fuscous transverse line somewhat before middle, slightly curved outwards; a very ill-defined small dark fuscous spot in disc at two-thirds, and another near inner margin a little beyond middle; a slender cloudy dark fuscous outwardly-curved transverse line from a little before apex to a little before anal angle, bent inwards beneath costa, closely followed by another much fainter similar line; a blackish hindmarginal line: cilia light grey, with rows of blackish points. Hindwings whitish-grey, transparent, hindmarginal edge suffusedly darker; a short linear streak of thick black scales at base below middle; cilia grey-whitish, with a well defined dark grey line near base.

The ornamental neck-frill of this species is very extraordinary, and reminds one somewhat of similar appendages in some humming-birds; it is probably less developed in the female.

One specimen taken at Sydney in October, amongst dry bush.

Hyp. melanostyla, Meyr.

This species differs from the other three of the genus in having vein 3 of the hindwings rising out of the stalk of 4 and 5. It is however closely allied to the others; the female, which is

alone known to me, has on the breast a cuirass of pearly scales, indicating near relationship with the preceding species ; it would therefore be conceivable that they should be the sexes of the same species, but the difference in neuration, as well as in superficial marking, renders this hardly probable.

EUCAMPYLA, n. g.

Euc. etheiella, n. sp.

♂. $9\frac{3}{4}''$. Head and thorax light fuscous-grey. Palpi dark fuscous-grey, towards base whitish-grey. Antennæ dark fuscous. Abdomen whitish ochreous. Legs dark fuscous, posterior tibiæ light ochreous above. Forewings very narrow at base, gradually dilated throughout, costa at first straight, towards apex moderately arched, apex round-pointed, hindmargin very oblique, strongly rounded ; a tuft of hairs concealed under the folded base of costa beneath ; rather light dull fuscous, sprinkled with dark fuscous scales ; costa suffused with dark fuscous ; an indistinct narrow dark fuscous transverse line from two-fifths of costa to a little before middle of inner margin, strongly bent outwards somewhat above middle ; a cloudy dark fuscous transverse spot in disc at two-thirds ; a narrow cloudy dark fuscous transverse line from five-sixths of costa to inner margin before anal angle, sending a sharply angulated tooth inwards above middle, and appearing to be margined posteriorly by a paler line, through the absence of dark fuscous scales from the groundcolour ; a cloudy dark fuscous hindmarginal line ; cilia ochreous-grey, with a pale ochreous basal line. Hindwings whitish, costa towards apex suffused with light fuscous-grey ; some short whitish-ochreous hairs at base ; a cloudy grey hindmarginal line ; cilia white, round apex ochreous-tinged and with a faint grey line.

Resembles the genus *Ephestia* in form and colouring, as well as in the costal tuft of hairs of the male, but differs markedly in neuration. One specimen taken at light near Sydney in August.

Callionyma, n. g.

Call. sarcodes, n. sp.

♂ $7\frac{3}{4}''$, ♀ $9\frac{1}{2}''$. Head, palpi, and thorax grey-whitish, more or less tinged with pale carmine; sides of frontal cone in male dark grey. Antennæ whitish, annulated with grey, basal joint carmine-tinged. Abdomen whitish-ochreous. Legs grey-whitish, slightly carmine-tinged, anterior and middle pair fuscous-grey beneath, tarsal joints fuscous-grey except at apex. Forewings somewhat oblong, rather broad, costa gently arched, apex acute, hindmargin nearly straight, slightly sinuate, oblique; dull ochreous-grey-whitish, in female slightly, in male strongly suffused with light brownish-carmine; extreme costal edge darker brownish-carmine; a very indistinct irregular somewhat outwardly curved brownish-carmine tranverse line from one-third of costa to two-fifths of inner margin; a similar line from two-thirds of costa to four-fifths of inner margin, irregularly bent outwards in middle; a small indistinct fuscous carmine spot in disc beyond middle; a strongly-marked broad cloudy blackish hindmarginal line; cilia pale ochreous-carmine, with a deep carmine basal line. Hindwings in male light fuscous-grey, in female whitish-grey, with a dark grey hindmarginal line; cilia grey-whitish, with a faint grey line near base.

A very distinct and elegant species.

One pair beaten from *Eucalyptus* bushes in November, the male at Parramatta, the female at Murrurundi, New South Wales.

TORTRICIDÆ.

Proselena, Meyr.

Pros. camacinana, n. sp.

♂ ♀. $5''$-$6''$. Head, palpi, and thorax in male yellowish-whitish, in female whitish-ochreous, somewhat mixed with dark fuscous-grey. Antennæ dark fuscous. Abdomen whitish-ochreous-grey. Anterior and middle tibiæ blackish, with ochreous-whitish median and apical rings, tarsi blackish with whitish rings at apex of joints;

posterior legs ochreous-whitish, tarsi dark grey towards base of joints. Forewings in male rather short, moderately broad, in female more elongate and narrower, costa rather strongly arched towards base, apex round-pointed, hindmargin nearly straight, in male moderately, in female rather strongly oblique; whitish, irregularly mixed with light grey, and in male with whitish-yellowish, in female pale ferruginous-yellow scales, which tend to accumulate on margins of dark markings; outer edge of basal patch generally sharply defined by a blackish-fuscous line from one-fourth of costa to one-third of inner margin, angulated outwards in middle, dilating gradually from middle to inner margin so as to form an erect wedgeshaped mark; between this line and base are some scattered blackish-fuscous scales; a slender indistinct grey transverse striga a little beyond and parallel to outer edge of basal patch; central fascia moderate, blackish-fuscous, darkest on edges, starting from middle of costa obliquely outwards, bent sharply back in middle of disc, ending abruptly on fold, not reaching inner margin, tooth of angulation ill-defined and sometimes posteriorly obsolete; beneath extremity of central fascia are two small dark fuscous spots on inner margin; beyond upper half of central fascia a slender dark fuscous parallel striga, terminating in the angulation; an irregular quadrilateral blackish-fuscous spot on costa at three-fourths, suffused beneath, anterior angle darkest; an elongate-triangular dark grey spot on anal angle, rather outwardly oblique, suffused towards apex, incompletely connected with costal spot by two indistinct strigæ; two oblique grey strigæ from costa just before apex to hindmargin below apex; an elongate cloudy blackish-grey mark along middle of hind-margin; cilia on costa and anal angle ochreous-whitish, on hind-margin dark grey, mixed with whitish, and with a blackish-grey line. Hindwings fuscous-grey, speckled with darker; cilia grey, with a dark grey basal line.

Superficially very different from *Pros. annosana*, Meyr., and much more nearly resembling the species of *Isochorista* or *Capua*;

but the pecular venation, and absence of a costal fold, leave no doubt of its true position.

Common at about 2,000 feet of elevation on the ascent of Mt. Wellington, Tasmania, flying readily over a mossy bank at the beginning of February.

Dichelia (?) humerana, Walk.

Having recently obtained specimens of this species in Tasmania, I am able to announce that, as conjectured, it does not belong to the *Tortricina* at all, but to a genus of *Tineina*, allied to *Depressaria*, Hw.

Cacoecia, Hb.

Cac. psapharana, n. sp.

♂ 8″, ♀ 8¾″. Head, palpi, antennæ, and thorax pale whitish-ochreous; palpi in male twice as long as head, in female hardly longer, slightly speckled externally with fuscous. Abdomen ochreous-whitish, anal valves of male large, tufted. Legs ochreous-whitish, anterior tibiæ, and anterior and middle tarsi speckled with dark fuscous, posterior tibiæ white. Forewings oblong, moderately broad, costa in male rather sharply bent somewhat before middle, in female rather strongly arched towards base, apex obtusely pointed, hindmargin slightly rounded, rather oblique, in female slightly sinuate below apex; costal fold of male very slight, short and imperfect; very pale whitish-ochreous, with faint regular slightly darker transverse strigulæ; basal patch wholly obsolete; central fascia very faintly defined, running from slightly before middle of costa to anal angle, light greyish-ochreous, upper third very narrow, lower two-thirds rather broad, posterior margin sharply incised below middle; a very indistinct light greyish-ochreous flattened-triangular patch on costa about three-fourths, and a similar triangular patch on middle of hindmargin; cilia ochreous-whitish. Hindwings whitish, irregularly strigulated with light grey; cilia white.

Intermediate between *C. postvittana*, Walk., and *C. mnemosynana*, Meyr., but differing from both in the very pale colouring and extremely faint markings; in the rudimentary costal fold of the male, and the whitish hindwings, it resembles the latter species, but in the markings of the forewings it rather approaches the former; the palpi of the male are proportionately longer than in either. The sexes do not perceptibly differ in colouring.

A fine pair taken *in cop.* near Launceston, Tasmania, amongst dry bush at the end of January.

AROTROPHORA, Meyr.

Arotr. ochraceella, Walk.

(*Crambus ochraceellus*, Walk., Brit. Mus. Cat., 177.)

♂. 15‴-16‴. Head white, with an orange spot on anterior margins of eyes. Palpi three and a half times as long as head, white, externally ochreous-orange. Antennæ ochreous-orange. Thorax white, anterior margin and shoulders suffusedly yellowish-ochreous. Abdomen elongate, stout, white. Legs white, beneath ochreous-tinged. Forewings broad, oblong, rather dilated posteriorly, costa gently arched, apex obtusely pointed, hindmargin rather sinuate, slightly oblique; deep ochreous-orange, lighter and mixed with white in disc below middle and towards hindmargin, the darker tint seeming to form a broad suffused subcostal streak, a narrow dorsal streak, and a round suffused spot in disc at two-thirds from base; a white costal streak from base almost to apex, attenuated to each extremity, somewhat speckled with orange, its lower margin suffused into ground colour; a very ill-defined white suffusion along vein 1; cilia light ochreous-orange mixed with white (defective). Hindwings white, faintly speckled with pale orange; cilia white.

This remarkable and very striking species, from its large size and conspicuous colouring, cannot be confused with any other insect. From the neuration, and structure of the palpi and

antennæ, there can be no doubt of its being a true *Arotrophora*, with more traceable relationship to *A. arcuatalis*, Walk., than to any other species.

One specimen beaten from *Banksia serrata* near Sydney in October; I have also seen two others from the same locality.

Arotr. hemerana, n. sp.

♂. 7‴-7½‴. Head, palpi, antennæ, thorax, and abdomen whitish-grey; palpi two and a half times as long as head, externally ochreous-tinged and speckled with dark grey. Legs whitish, anterior and middle tarsi and tibiæ grey with whitish rings. Forewings moderate, posteriorly dilated, costa strongly arched, apex obtusely pointed, hindmargin very slightly sinuate, rather strongly oblique; light grey, finely strewn with whitish scales, with fine irregular dark grey transverse strigulæ, and a few scattered blackish scales; some very inconspicuous, sometimes almost obsolete, markings composed of brownish-ochreous scales mixed with blackish, forming some small irregular spots in disc about one-third, a narrow fascia from middle of costa to two-thirds of inner margin, interrupted on disc and very ill-defined on lower half, some speckles near costa towards apex, and an elongate tolerably well-defined straight slender streak very near and parrallel to hindmargin from near apex to anal angle; a tolerably conspicuous black dot in disc at three-fifths; a row of very ill-defined blackish dots on hindmargin, mixed with ochreous; cilia grey-whitish, with a sharply defined dark grey line near base, and two other very cloudy grey lines. Hindwings whitish-grey; cilia grey-whitish, with two very faintly darker lines.

Allied to *A. confusana*, Walk., but considerably larger than it or the narrower-winged *A. lividana*, Meyr., and *A. atimana*, Meyr.; in form of wing it nearly resembles *A. confusana*, but may be known by its very uniform grey colouring, without distinct dark transverse markings, or reddish-ochreous suffusion.

Five specimens taken amongst luxuriant bush on the ascent of Mount Wellington, Tasmania, at an elevation of about 3,000 feet.

CONCHYLIDÆ.

Hyperxena, n. g.

Thorax with a double erect posterior crest. Antennæ in male —? Palpi very long, straight, porrected, second joint with long rough obliquely projecting hairs above, terminal joint very loug, roughly scaled above. Posterior tibiæ fringed with short hairs above. Forewings elongate, narrow, costa (in male probably simple) strongly arched, apex acute, hindmargin very oblique; surface with raised scales. Hindwings elongate, as broad as forewings, cilia long. Forewings with veins 7 and 8 separate, 7 running to costa, secondary cell indicated, vein 1 furcate at base (?). Hindwings with 8 veins, 3 and 4 remote at origin, parrallel, 5 nearly parallel to 4, 6 running to costa, 6 and 7 remote at origin, nearly parallel.

This interesting genus is nearly allied to *Heliocosma*, Meyr., which previously stood alone; the curious venation is nearly identical, the essential point of distinction being that vein 7 of the forewings runs to the costa, a very unusual character among the *Tortricina* which recurs in the remote genus *Teras*, Tr., and vein 6 of the hindwings also runs to the costa. The thoracic crest, very oblique hindmargin of the forewings, and long cilia are also notable characters.

Hyperx. scierana, n. sp.

♀. $7\frac{3}{4}''$-$8\frac{3}{4}''$. Head, palpi, and thorax fuscous-grey, finely irrorated with whitish. Antennæ grey. Abdomen ochreous-whitish. Anterior and middle legs fuscous-grey, with cloudy whitish rings at apex of joints; posterior legs grey-whitish. Forewings narrow, costa strongly and evenly arched, apex acute, hindmargin almost straight, very oblique; fuscous-grey, finely

irrorated with grey-whitish, and with scattered dark fuscous scales; some raised scales at about one-fourth from base on disc and towards inner margin; very faint indications of a darker outwardly oblique streak from costa at one-fourth to middle of inner margin, and a spot in disc at two-thirds; cilia grey with whitish points, mixed with darker fuscous-grey at base. Hindwings pale whitish-grey; cilia grey-whitish, with a faint grey line near base.

A peculiar and abnormal-looking insect, at first sight not at all like the *Tortricina.* It is very possible that the male may be more distinctly marked.

Two specimens beaten from scrub, one at Parramatta in August, the other at Blackheath on the Blue Mountains in September.

Heterocrossa, n. g.

Thorax smooth. Antennæ in male with long fine cilia. Palpi rather long or very long, second joint roughly haired above and towards apex beneath, attenuated, terminal joint moderate, exposed. Posterior tibiæ fringed with hairs above. Forewings elongate, narrow, costa in male simple, moderately arched, apex pointed, hindmargin oblique; surface with raised scales. Hindwings elongate, broader than forewings, lower median vein pectinated towards base. Forewings with veins 7 and 8 separate, 7 running to hindmargin, secondary cell absent, upper fork of vein 1 obsolete. Hindwings with 6 veins, 3 and 4 stalked from posterior angle of cell, 5 from upper angle of cell to slightly above apex, 6 free.

Closely allied to *Paramorpha*, Meyr., but differing from it and all other genera of the family in the basal pectination of the lower median vein. The absence of this pectination is a family characteristic, but although this case proves that the characteristic is not an infallible one, yet it will be observed that the family is still absotutely distinguished from the other two by the origin of vein 2 from near before the angle, and, as I have remarked in my

general paper on the *Tortricina*, the exceptional failure of a character need not vitiate its general value, since families can rarely be distinguished by a single point, but by the consideration of the sum of general characters.

The genus occurs in Australia and New Zealand, three species being known to me, two of which I had erroneously included elsewhere.

1. *Het. neurophorella*, Meyr.

(*Epischnia neurophorella*, Meyr., Proc. Linn. Soc., N.S.W., IV., 232).

The only Australian species, distinguishable by the dark longitudinal lines on the veins.

2. *Het. abreptella*, Walk.

(*Paramorpha abreptella*, Meyr., Proc. Linn. Soc., N.S.W., VI., 698).

The basal pectination was partially obliterated in my originally described specimens, but I have since obtained a series from Christchurch, N.Z., which leave no doubt of its true position. The fuscous-grey colouring, which is sometimes very deep, will distinguish this from the other two species.

3. *Het. gonosemana*, n. sp.

♀. 9‴. Head white. Palpi about twice the length of head, upper half white, lower half dark fuscous, terminal joint white, dark fuscous at base. Antennæ white, with indications of dark rings. Thorax white, on shoulders ochreous-tinged. Abdomen ochreous-white. Anterior and middle legs dark fuscous, with ochreous-white rings at apex of joints; posterior legs ochreous-white. Forewings elongate-oblong, narrow, costa slightly arched, bent and roughened with scales about one-third, apex obtusely pointed, hindmargin straight, moderately oblique; white, with a few scattered grey scales, towards inner margin very faintly

ochreous-tinged; a thick black streak along basal fifth of costa, attenuated at each end; a black dot on costa closely beyond it; a small irregular black mark in disc at one-third, immediately preceded by a small dark fuscous-grey suffusion, and followed by two tufts of raised scales, half blackish and half white; a small subquadrate rather inwardly oblique black spot on costa at one-third, almost connected with discal black spot; all these black markings are somewhat mixed on margins with ochreous; some raised scales towards base, and inner margin at one-third; five short cloudy blackish marks on costa at equal distances between one-third and apex, rather oblique inwardly; five small spots of raised whitish-ochreous scales arranged in an oval in disc, each with a few black scales on margin; between these, and above posterior of them, is an ill-defined grey suffusion; a very ill-defined cloudy grey irregular dentate transverse line from second of the five costal marks to inner margin at four-fifths, only distinct on upper half and on inner margin; a more distinct dentate grey line from third costal mark to inner margin before anal angle, strongly curved outwards and sinuate, containing a series of ill-defined black dots; a row of very ill-defined black dots on hindmargin: cilia grey, closely irrorated with whitish points. Hindwings whitish-slaty-grey, cilia white, with a faint grey line.

A very distinct species, through the white ground colour, and black marks towards base.

I took one perfect specimen at Dunedin, New Zealand, amongst dry bush at the beginning of February, and have seen two others from the same place.

Bondia, Newm.

Thorax smooth. Antennæ in male with long fine ciliations, basal joint broadly flattened. Palpi in male moderate, curved, ascending, second joint broadly scaled, scales angularly projecting in front, terminal joint slender, scaled, erect; in female moderate

or long, straight, porrected, second joint broadly scaled, laterally ccmpressed, terminal joint slender, scaled, porrected. Posterior tibiæ fringed with hairs above. Forewings elongate, very narrow, costa in male simple, nearly straight, apex obtuse or almost acute, hindmargin very oblique; surface with tufts of raised scales. Hindwings elongate, apex attenuated, as broad or somewhat broader than forewings, cilia very long, as broad or broader than hindwings. Forewings with veins 7 and 8 separate, 7 running to hindmargin, secondary cell absent, 1 furcate at base. Hindwings with 6 veins, 3 and 4 separate, more or less remote at origin, 3 from upper angle of cell to slightly above apex, 6 free.

Immediately separate from the other genera possessing only 6 veins in the hindwings, by the remoteness of veins 3 and 4 at crigin; in all others they rise from a stalk. The peculiar ascending palpi of the male are also a very singular characteristic, reminding one of some of the *Tineidæ*, such as *Scardia*, but the palpi of the female approximate to the ordinary type of the group.

All the species are blackish, with the forewings much roughened and their habit is to sit on the blackened and charred fibrous bark of some species of *Eucalyptus*, where they are practically invisible until induced to move. I possessed those here described before the publication of my last papers, but so curious is their superficial appearance that I had never suspected their affinity until lately. They are in fact closely allied to the genera previously described, though it may be doubted whether any one, who had not closely studied the neuration, would be induced to believe, without seeing the connecting links, that *Bond. attenuatana* really belonged to the *Tortricina*.

I may mention here that *Carposina*, HS., represented by two European species, is without doubt referrable to this group, though erroneously placed hitherto in the *Gelechidæ*, to which it has no affinity; the six-veined hindwings, long straight porrected palpi, and tufts of scales on forewings, are sufficient proofs. Superficially it nearly resembles *Heterocrossa*.

Newman's description of this genus is perfectly recognisable, and sufficient for characterisation, although the neuration is omitted.

The larvæ must certainly be attached to species of *Eucalyptus*, feeding either in the bark or perhaps in the fruit-capsules.

1. *Bond. nigella*, Newm.

(*Bondia nigella*, Newm., Trans. Ent. Soc., Lonn., Vol. III., N.S., 289).

♂ ♀. 7½"-8¾". Head, palpi, antennæ, and thorax blackish, sprinkled thinly with ochreous-grey; palpi in female rather long. Abdomen light grey. Anterior and middle legs blackish; posterior legs ochreous-grey-whitish, tarsi suffused with fuscous-grey except at apex of joints. Forewings very narrow, oblong, costa straight, slightly bent at base and apex, apex round pointed, hindmargin almost straight, very oblique; blackish, with a few fine scattered ochreous-whitish scales; numerous scattered tufts of raised scales; posterior half of costa with faintly indicated strigulæ; a C-shaped whitish-ochreous or pale yellowish-ochreous transverse mark in disc at three-fifths, extremities directed outwards: cilia blackish. Hindwings and cilia in male pale grey, in female somewhat darker.

Easily distinguished from all the others by the pale ochreous C-shaped mark in disc.

Taken near Sydney in July and September, and also received from Victoria.

2. *Bond. dissolutana*, n. sp.

♂ 6¾"-9", ♀ 8¾"-10". Head, palpi, antennæ, and thorax blackish, finely sprinkled with ochreous-grey; palpi in female long. Abdomen in male blackish, in female grey. Legs blackish; posterior tibiæ ochreous-grey-whitish, in male sometimes blackish, tarsi with ochreous-whitish rings at apex of joints. Forewings

narrow, in female rather broader, oblong, costa straight, slightly bent at base and apex, apex round-pointed, hindmargin almost straight, very oblique; blackish, sprinkled with ochreous-whitish scales; numerous scattered tufts of raised scales; cilia blackish. Hindwings in male bright orange-yellow, apex irregularly dark fuscous, costa and upper part of hindmargin very narrowly and irregularly dark fuscous, cilia dark fuscous-grey; in female light grey, towards base ochreous-tinged, apex and hindmargin towards apex suffused with dark grey, cilia light grey, darker round apex, with an indistinct darker line near base.

The male is immediately known by the orange-yellow hindwings; the female may be distinguished from the other unicolorous species by its large size, long palpi, rather broader forewings, and the ochreous tinge of hindwings.

Taken at Blackheath on the Blue Mountains (3,500 feet) in October; Mr. G H. Raynor also met with it at Melbourne.

3. *Bond. maleficana*, n. sp.

♂ ♀. $5\frac{1}{4}''$-$6\frac{1}{4}''$. Head, palpi, antennæ and thorax blackish, sprinkled with whitish-ochreous; palpi in female moderate. Abdomen grey. Anterior and middle legs dark fuscous, posterior legs grey, all tarsi with pale rings at apex of joints. Forewings very narrow, oblong, costa gently arched, apex round-pointed, hindmargin nearly straight, very oblique; blackish, with scattered whitish-ochreous scales; numerous scattered tufts of raised scales; cilia blackish. Hindwings light grey, apex rather darker; cilia light grey.

Much smaller than female of the preceding species, narrower-winged, with shorter palpi; considerably larger than *B. attenuatana*, darker, and broader-winged, with shorter cilia.

Common at Sydney and Parramatta in September and November.

3. *Bond. attenuatana*, n. sp.

♂ ♀. $3\frac{3}{4}''$-$4\frac{1}{2}''$. Head, palpi, antennæ, and thorax blackish-fuscous, sprinkled with whitish-ochreous; palpi in female

moderate. Abdomen grey. Anterior and middle legs dark fuscous, posterior legs grey, all tarsi with pale rings at apex of joints. Forewings very narrow, oblong-lanceolate, costa gently arched, apex almost acute, hindmargin extremely oblique; blackish-fuscous, sprinkled with greyish-ochreous, towards base somewhat mixed with whitish ochreous; numerous tufts of raised scales: cilia blackish-fuscous. Hindwings strongly attenuated, light fuscous-grey, apex rather darker; cilia broader than hindwings, light grey.

Recognisable by its small size and extremely narrow wings, very long cilia, and less deep colour.

Met with once in abundance at Parramatta in July.

GLYPHIPTERYGIDÆ.

Hypertropha, Meyr.

Hyp. desumptana, Walk.

(*Orosana desumptana*, Walk., Brit. Mus. Cat. 460; *Hypertropha thesaurella*, Meyr., Proc. Linn. Soc., N.SW., V., 209).

Not identified until my recent inspection of the type. The species is included by Walker in his imaginary genus *Orosana* (affectionately referred to by Butler as "this little Australian genus") which contains a motley collection of *Hypertropha*, *Eupselia*, and various *Pyrales*.

Simaëthis, Leach.

Sim. combinatana, Walk.

Simaëthis abstitella, Walk., Brit. Mus. Cat. 997, may be added as a synonym of this species.

Eupselia, Meyr.

Eups. carpocapsella, Walk.

On reference to the Museum types of this species and *E. beatella*, Walk., the species which I possess proved to belong to

this species, to which therefore my description of *E. beatella* (Proc. Linn. Soc., N.S.W., V., 219) refers, as well as the description of *E. carpocapsella* quoted from Walker.

Eups. beatella, Walk.

(*Orasana* (?) *beatella*, Walk., Brit. Mus. Cat., 999.)

"♂. 8″. Forewings hardly acute, slaty-cinereous, with several brownish interrupted transverse lines, and with two dark brown purple-tinged patches; first patch extending from inner margin to disc; second much larger than first, extending from anal angle to disc; hindmargin with deep black points and with a purple marginal line. Hindwings yellow, inner and hind margins dark fuscous."

The above is an abstract of all that has any importance in Walker's description. The locality (given as Australia) is perhaps Queensland.

GLYPHIPTERYX, Hb.

Glyph. cyanochalca, n. sp.

♂. $5\frac{1}{2}''$-$6\frac{1}{4}''$. Head and thorax ochreous-bronze, back dark fuscous. Palpi short, rather drooping, roughly scaled, whitish-ochreous, second joint mixed with blackish towards apex, with indications of two whorls, terminal joint minute. Antennæ dark fuscous. Abdomen whitish-ochreous, segments suffused with dark fuscous towards base. Legs dark fuscous, posterior tarsi with indistinct ochreous-whitish rings at apex of joints. Forewings moderate, not dilated, hindmargin very slightly rounded, not sinuate; rather light brassy-ochreous; markings silvery-metallic with brassy reflections, margined with grey; an upwards-curved streak from base beneath costa to inner margin before middle; a parallel curved transverse streak from costa at one-fifth, not reaching beyond fold; a nearly straight transverse fascia from slightly before middle of costa to inner margin beyond middle, attenuated or interrupted on fold; an inwardly oblique wedge-

shaped streak from costa at three-fifths, reaching half across wing, becoming ochreous-white on costa and produced as an ochreous-white streak along costa to five-sixth ; a narrow longitudinal streak in disc beneath the ochreous-white costal streak, its posterior extremity sometimes turned up and connected with it ; an erect roundish spot on inner margin before anal angle, with a small black spot on each side of its apex ; a slightly curved streak close before hindmargin from a white spot before apex to anal angle ; cilia with basal half brassy-ochreous, terminal half light grey, separated by a blackish-grey line. Hindwings and cilia dark fuscous.

By the absence of any black discal patch, white hindmarginal indentation, or apical hook in the cilia, this species stands at once distinguished from all other described Australian species, and it would seem to have most relationship with the very differently marked European *G. bergstræsserella*, F. The palpi are much shorter than in any other Australian species, and the general aspect is peculiar, but the venation is of the ordinary type.

Three specimens taken in grassy bush at Mittagong (2,000 feet) and Blackheath (3,500 feet) in the Blue Mountains, in February and March.

Glyph. cyanophracta, n. sp.

♂. $4\frac{1}{2}''$-$5''$. Head and thorax greyish-bronze. Palpi with four oblique whorls of black ochreous-white-tipped scales, apex black, with ochreous white longitudinal lines above and below. Antennæ dark fuscous. Abdomen dark fuscous, segments with obscure ochreous-whitish apical rings. Legs dark fuscous, with obscure ochreous-whitish rings at middle and apex of tibiæ, and apex of all tarsal joints. Forewings moderate, posteriorly dilated, hindmargin rounded, slightly sinuate ; ochreous-bronze, an ill-defined yellowish-white spot at base of inner margin, not reaching costa ; a straight violet-blue-metallic fascia from two-

sevenths of costa two-fifths of inner margin, becoming ochreous-white on inner margin ; a second straight violet-blue-metallic fascia from slightly before middle of costa to slightly beyond middle of inner margin ; a large roundish black patch resting on anal angle and extending nearly to costa, its upper half crossed by six whitish-ochreous longitudinal lines, of which the four upper terminate anteriorly in one small round violet-golden-metallic spot, the two lower extend from posterior edge only halfway across ; a small violet-blue-metallic spot on costa beyond middle, touching the black patch ; some pale ochreous scales in the black patch near its lower anterior angle, and seven small roundish violet-golden-metallic spots scattered through its lower half ; a slightly outwards-curved violet-blue-metallic fascia from costa at five-sixths to hindmargin at lower posterior angle of black patch ; an elongate transverse violet-blue-metalic apical spot : cilia grey, basal half scaled with light bronzy-ochreous, beneath black patch with whitish-ochreous, and separated by a broad blackish-grey line, with a triangular ochreous-white indentation above middle of hindmargin, costal cilia dark grey with a small ochreous-white spot above ante-apical fascia, and a larger wedge-shaped ochreous-white spot above apex. Hindwings and cilia dark fuscous.

A beautiful species, intermediate in size and general characteristics between the much larger *G. cometophora*, Meyr., and the much smaller *G. iometalla*, Meyr., differing from both in the violet-blue tinge of the metallic fasciæ, and in the more numerous metallic spots on the black patch ; from the former also by the whitish dorsal spot near base and the less numerous longitudinal lines, from the latter by the completeness of the first fascia, and more numerous and conspicuously developed longitudinal lines.

I found this species pretty commonly near Burragorang, New South Wales, at the bottom of the deep gorge which receives the confluence of the Nattai and Wollondilly Rivers, flying in the sun over grassy banks in April ; and afterwards met with it

frequenting the blossoms of a species of *Carex* on the summit of the surrounding table-land.

Glyph. triselena, Meyr.

The description of this species (Proc. Linn. Soc., N.S.W., V., 234) is very defective in respect of the basal markings of the forewings, which are peculiar and highly characteristic, and is also inaccurate in some minor points, owing to the inferior condition of the two original specimens; I have thought it best therefore to redescribe the species from a series of specimens in fine condition, taken at Christchurch, N. Z., in February.

♂ ♀. $4\frac{1}{2}''$-$5''$. Head and thorax greyish-bronze, with an ochreous-whitish longitudinal line on each side of back from behind eyes through thorax, shoulders golden-ochreous. Palpi black, with four whorls of black white-tipped scales. Antennæ dark fuscous. Abdomen elongate, grey, with white apical rings on segments, apex white. Anterior and middle tibiæ and tarsi dark fuscous with whitish rings, posterior tibiæ and tarsi light grey with whitish bands. Forewings elongate, narrowed posteriorly, hindmargin very oblique, slightly sinuate; light golden-ochreous; an ochreous-whitish streak along inner margin from base nearly to middle, broadly and suffusedly margined above with dark grey; a curved leaden-metallic streak from base nearly to middle, broadly and suffusedly margined above with dark grey; a curved leaden-metallic streak from base beneath costa to near inner margin at one-third from base; a slightly curved oblique leaden-metallic streak from costa at one-fourth, reaching half across wing, terminating above apex of basal streak; two straight parallel direct leaden-metallic transverse fasciæ, one before, the other slightly beyond middle; from second below middle proceeds a rather narrow longitudinal black band, bent downwards to anal angle, thence continued along lower half of hindmargin, containing two golden-metallic spots in the bend and two others on the hindmargin; the space above this nearly to

costa is filled by six whitish longitudinal lines, partially confluent or separated by narrow black interspaces; two indistinct leaden-metallic spots on costa, merged beneath in the whitish lines; a transverse leaden-metallic subapical spot: cilia whitish-grey, basal third within a blackish line scaled with light golden-ochreous, with a whitish indentation beneath apex, costal cilia grey with whitish spots on costal streaks. Hindwings slaty-grey, cilia rather lighter grey.

Immediately recognisable amongst its allies by the narrow forewings, light groundcolour, and longitudinal basal markings, which are especially noticeable when the wings are closed.

Glyph. amblycerella, n. sp.

♂. 5¼‴. Head and thorax greyish-bronze. Palpi white, with four oblique whorls of black white-tipped scales, lowest one indistinct, apex black with a white lateral line. Antennæ dark fuscous. Abdomen dark fuscous, segments with obscure whitish apical rings. Legs dark fuscous, with slender whitish rings at middle and apex of tibiæ, and apex of all tarsal joints. Forewings moderate, slightly dilated, hindmargin rather strongly sinuate beneath apex; bronzy-ochreous, towards base indistinctly suffused with fuscous, and narrowly along costa and inner margin; all markings suffusedly edged with dark grey; a clearly defined outwardly oblique elongate transverse white spot on inner margin near base, reaching half across wing, apex irregularly truncate, posterior edge rather concave; a straight violet-metallic fascia from slightly beyond one-third of costa to middle of inner margin, including an ochreous-white dot on costa, and ending in a white quadrilateral spot on inner margin; a short oblique obsolete pale streak from costa before middle, beyond extremity of which is a very irregular suffused black spot; a longitudinally elongate black spot in centre of disc, its posterior extremity containing a roundish violet-silvery-metallic spot; two small roundish violet-silvery-metallic spots in disc beneath central spot, partially

surrounded with black scales, a third similar spot on inner margin at three-fifths, a fourth slightly above and beyond third, and a fifth in disc below middle above anal angle; beyond the fifth the black scales tend to form a small separate spot; an oblique violet-silvery-metallic streak from costa slightly beyond middle, almost reaching fifth discal spot, and containing an ochreous-white costal dot; a similar shorter streak a little beyond it; an outwardly curved violet-silvery-metallic fascia from a white dot on costa at five-sixths to hindmargin below middle, thence produced to anal angle, interrupted above hindmargin; a short violet-silvery-metallic subapical streak from a white dot on costa before apex to hindmarginal indentation: cilia on hindmargin with basal half bronzy-ochreous, terminal half white, separated by a broad blackish-grey line, with a triangular white indentation above middle, on anal angle dark grey, with a white dot beneath inner-marginal spot, costal cilia dark grey, with white wedge-shaped spots on extremities of two posterior metallic streaks. Hind-wings and cilia dark fuscous.

Allied to *G. asteriella*, Meyr., but easily known by the white dorsal spot near base only reaching half across wings, and the absence of the regular black longitudinal lines posteriorly, as well as by various differences of marking. There is no complete black patch, but it is indicated by the scattered black scales round the posterior metallic spots.

One specimen taken by Mr. G. H. Raynor at Warragul in Gippsland, Victoria, in December.

Glyph. holodesma, n. sp.

♂. 6¼‴. Head and thorax bronzy-grey. Palpi whitish, with three oblique whorls of black ochreous-white-tipped scales, apex black with an oblique ochreous-white lateral line. Antennæ dark fuscous, towards base with ill-defined whitish-ochreous annulations. Abdomen dark grey, segments suffusedly whitish at apex, extremity whitish-ochreous. Legs dark fuscous, with ochreous-

whitish rings at middle and apex of tibiæ, and apex of all tarsal joints. Forewings moderate, posteriorly dilated, hindmargin very slightly sinuate beneath apex; bronzy-greyish-ochreous, costa and inner margin narrowly suffused with dark fuscous; all markings irregularly edged with dark fuscous; six silvery-metallic transverse fasciæ starting from white spots on costa; first nearly straight, oblique, from one-fourth of costa to before middle of inner margin, ending in an ochreous-white spot on inner margin; second parallel, bent in disc, ending on fold; third parallel, reaching half across wing, ending in a small dark fuscous-spot; fourth outwardly curved, from two-thirds of costa to three-fourths of inner margin; fifth parallel to fourth, ending in anal angle sixth subapical, from costa before apex to hindmarginal indentation; a small roundish blackish apical spot: cilia on hindmargin bronzy greyish-ochreous towards base, terminal half white, separated by a blackish-grey line, and with a small triangular white indentation beneath apex, and a whitish spot at anal angle; costal cilia blackish-grey, with white spots on extremities of fasciæ. Hindwings dark grey, cilia rather lighter grey.

A very distinct species, allied to the group of *Glyph. asteriella*, Meyr., but characterised especially by the absence of any indications of the black patch, and by the regularity and completeness of the metallic fasciæ.

One fine specimen taken flying over rushes in a damp place on the ascent of Mount Wellington, Tasmania, at about 2,500 feet of elevation, at the beginning of February.

Glyph. tetrasema, n. sp.

♂. 5‴-5¼‴. Head and thorax greyish-bronze. Palpi white, with four oblique whorls of black white-tipped scales, apex white with a black line beneath. Antennæ dark fuscous. Abdomen dark fuscous, apex whitish. Legs dark fuscous, with slender whitish rings at middle and apex of tibiæ, and apex of all tarsal joints. Forewings moderate, rather dilated, hindmargin sinuate;

pale brassy-ochreous, irregularly mixed with ochreous-bronze; all markings broadly and suffusedly margined with dark fuscous; two similar straight oblique transverse quadrilateral white spots on inner margin, first near base, second in middle, suffusedly truncate above, reaching about half across wing; seven oblique white streaks from costa, first broadest, nearly reaching apex ot second dorsal spot, next four all short, narrow, reaching about one-third across wing, last two very short, close together before apex; about five small ill-defined shining white, slightly violet-metallic spots irregularly placed in disc beyond middle, mixed with a few black scales, a sixth on inner margin a little before anal angle, a seventh on anal angle, two others near hindmargin below middle, a tenth towards hindmargin above middle, an eleventh on hindmarginal indentation, and a twelfth below apex, adjoining a small roundish black apical spot: cilia on hindmargin white, basal third scaled with brassy-ochreous and separated by a black line, with a deep white triangular indentation below apex; cilia on anal angle grey, with a white spot before anal angle; costal cilia dark grey, with white spots on costal streaks, and a blackish-fuscous spot above apex, lower edge sharply defined, forming a short incomplete apical hook. Hindwings rather dark grey, cilia rather lighter.

Belongs to the group characterised by the possession of two pale dorsal spots which do not give rise to metallic transverse lines; in this group it is intermediate between *G. meteora*, Meyr., and *G. leucocerastes*, Meyr., differing from the former by the first dorsal spot reaching only half across wing, and from the latter by both dorsal spots being obtusely truncate, not attenuated; it is further distinguished amongst the whole group by the number of the posterior metallic spots.

Two specimens taken in a damp place about 3,000 feet up Mount Wellington, Tasmania, early in February. This species has veins 7 and 8 of the forewings stalked, a character which recurs in two or three other species which are not specially allied

to one another, and in this genus appears to be of no importance, though usually elsewhere of great value.

Glyph. acinacella, n. sp.

♂. 3½‴. Head and thorax dark shining greyish-fuscous. Palpi white, with four oblique whorls of black white-tipped scales, apex white with a black line beneath. Antennæ dark fuscous. Abdomen blackish-fuscous. Legs blackish-fuscous, with slender white rings at middle and apex of tibiæ, and apex of all tarsal joints. Forewings moderate, not dilated, hindmargin sinuate; dark fuscous, slightly bronzy-tinged; a narrow curved very oblique white streak from inner margin before middle, attenuated gradually throughout to extremity, somewhat broken at two-thirds of its length, reaching half across wing, ending in disc beyond middle; five slender oblique white somewhat violet-shining streaks from costa, indisdinctly darker-margined anteriorly; first from slightly beyond middle of costa, reaching half across wing to just beyond apex of dorsal streak; second rather shorter; other three very short, wedge-shaped; a short erect whitish violet-shining streak from inner margin before anal angle, nearly reaching apex of second costal streak; some indistinct scattered whitish violet-shining scales towards anal angle and lower half of hindmargin; a small violet-metallic spot on hindmargin beneath apex, adjoining a round blackish apical spot: cilia rather shining fuscous-grey, with a suffused darker grey line, and a triangular ill-defined indentation beneath apex, costal cilia dark grey with white spots on costal streaks, no defined apical hook (?). Hindwings and cilia dark fuscous.

Nearest allied amongst Australasian species to *G. actinobola*, Meyr., but immediately known by not possessing any white streak from before middle of costa. It comes nearer to the European group of *G. equitella*, Sc., *G. fischeriella*, Z., and their allies, but the dorsal streak is rather nearer base, and the first costal streak somewhat further from base than in any species known to me,

the dorsal streak is somewhat longer and more finely attenuated than in *G. fischeriella*, and the second costal streak does not unite with the dorsal spot before anal angle. The cilia are not in good condition, and it is very possible that the white extremities and apical hook have been worn away.

One specimen taken by Mr. G. H. Raynor at Warragul in Gippsland, Victoria, in December.

ERECHTHIADÆ.

Eschatotypa, Meyr.

Esch. derogatella, Walk.

(*Tinea derogatella*, Walk., Brit. Mus. Cat. 485; *Eschatotypa melichrysa*, Meyr., Proc. Linn. Soc., N.S.W., V., 257).

I did not identify Walker's description until I had seen the type.

Erechthias, Meyr.

Erech. stilbella, Doubl.

This species should have been quoted as of Doubleday, being originally described by him in Dieffenbach's New Zealand, Vol. II., p. 289; Walker's description refers to the same species.

GRACILARIDÆ.

Gracilaria, Z.

Grac. argyrodesma, n. sp.

The only specimen of this insect, which I possess, was unfortuately greatly damaged by an accident whilst being set; but as it is very distinct, and one forewing is perfect, and moreover the larval habits are known, I give what will probably be a sufficient diagnosis.

2½″. Forewings dark fuscous, with two transverse fasciæ and four spots snow-white, black-margined; first fasciæ at one-fourth, straight, direct, rather narrow, suddenly attenuated on margins,

posterior edge incised in middle; second about middle, slender, somewhat sinuate, slightly oblique, obscurely interrupted above middle; a small roundish spot on costa about three-fourths, and another slightly larger exactly opposite it on inner margin; a very small dot on costa before apex, and a still smaller one on inner margin beneath apex; cilia dark fuscous. with a blackish line round apex. Hindwings and cilia dark grey.

The smallest species of the genus known to me, belonging to the group of *G. autadelpha*, Meyr., and *G. cænotheta*, Meyr., in which it is characterised by its small size, dark groundcolour, the slenderness and interruption of the second fascia, and smallness of the marginal spots.

The larva mines a nearly flat discoloured blotch in leaves of *Grevillea linearis* (*Proteaceæ*), occupying apical half of the narrow leaf, upper surface slightly contracted. Pupa in a firm cocoon, not within the mine. I collected a larva accidentally in August amongst a great number of larvæ of one of the *Gelechidæ* feeding on the same shrub, and did not observe it until the imago emerged in September, when on examination I found the mine and cocoon.

Grac. chionoplecta, n. sp.

♂ ♀. 2⅜″-3¼″. Head, palpi, and thorax snow-white, labial palpi with two black rings. Antennæ dark fuscous, basal joint white. Abdomen pale silvery-grey, segments with white apical rings, apex white. Anterior tibiæ blackish with indistinct basal and median white rings, tarsi white with blackish bands at apex of each joint; middle tibiæ slightly thickened, blackish with broad median white band, tarsi white with narrow blackish rings at apex of each joint; posterior tibiæ white, apex dark grey, tarsi white with dark grey rings at apex of joints. Forewings dark greyish-ochreous, with scattered black scales, and with two fasciæ and seven spots snow-white, black margined; some irregular white scales near base; first fascia about one-fifth, very broad,

broadest on inner margin, edges irregularly sinuate; second fascia about two-fifths, as broad as first, very irregularly curved outwards in middle, sometimes narrowly connected on inner margin with first fascia and first dorsal spot; a minute indistinct spot on middle of costa; a moderate subquadrate spot on costa about two-thirds, and a considerably larger irregular spot slightly before it on inner margin, nearly reaching it, only separated by the black margins, forming a rather oblique black line; two small spots on inner margin beyond the large dorsal spot, and a small spot between them on costa; a small apical spot, cutting off a black apical dot: cilia pale whitish-grey, costal cilia grey with white spots on costal spots, Hindwings grey, cilia pale whitish-grey.

Allied to the group of *G. cænotheta*, Meyr.; distinguished by the number of the posterior spots, and the breadth of the fasciæ.

Larva rather stout, cylindrical, tapering at both ends, head small; ochreous-yellowish, with a rather large transverse-oval or elongate-transverse deep bright carmine-pink spot on back of each segment, second segment somewhat suffused with carmine-pink; head brownish-ochreous, suffused with dark fuscous on margins. Mines a broad tubularly inflated gallery in leaves of *Phebalium dentatum* (*Rutaceæ*), lower surface somewhat contracted, both surfaces discoloured. Pupa in a firm white cocoon on under surface of leaf. I found this beautiful larva commonly near Sydney, where however its foodplant is local, in August, and bred eight specimens early in October.

Grac. ida, Meyr.

Larva moderate, thickest anteriorly, gradually tapering behind, head small; light yellowish; head pale ochreous, mouth dark fuscous. Mines first a gallery in leaves of *Eucalyptus piperita* (?) (*Myrtaceæ*), mine at first slender, contorted, then straight, tubular, discoloured to reddish-brown; when nearly full-grown leaves the mine and feeds within a conical chamber made of a

small leaf spirally rolled. Pupa in a flat cocoon beneath the leaf, causing the edges to contract. I found several of these larvæ, on a dwarfed seedling which I believe to be correctly referred as above, in August, and bred five specimens in September, showing no sign of approximation to *G. formosa*, Stt.

Grac. toxomacha, n. sp.

♂. $3\frac{1}{2}''$. Head snow-white, with a dark fuscous spot on anterior margin of eyes. Labial palpi white, with a black band on second joint becoming two rings internally, and a black sub-apical ring on terminal joint. Maxillary palpi dark fuscous. Antennæ dark fuscous, with slender whitish annulations. Thorax white, sides brownish-ochreous. Abdomen grey, anal valves very large. Anterior tibiæ blackish, tarsi blackish with white bands at apex of joints; middle tibiæ dark grey, with two suffused whitish bands, tarsi blackish with white rings at apex of joints; posterior tibiæ white, apex blackish, tarsi blackish with white rings at apex of joints. Forewings dark greyish-ochreous; costal edge slenderly dark fuscous; an irregular white streak from base near inner margin to inner margin at two-thirds from base, beneath suffused, above margined by an interrupted black line, twice sinuate posteriorly; a very oblique sinuate gradually attenuated white black-margined streak from costa at one-third almost to anal angle, very slender posteriorly; a suffused shorter oblique sinuate whitish streak from costa immediately beyond it, reaching half across wing, most distinct on disc; a straight oblique attenuated white black-margined streak from costa at two-thirds, reaching half across wing, and a similar hardly oblique streak a little beyond it, almost touching one another in disc; a slender black-margined streak from inner margin opposite and in a line with the second of these, almost meeting it; a white apical spot, containing an elongate black dot: cilia pale whitish-ochreous-grey, with two sharply-marked black lines round apex, on

costa fuscous, with white spots on costal streaks. Hindwings grey, cilia whitish-ochreous-grey.

Belongs to the group of *G. thalassias*, Meyr., but very distinct; easily recognised by the remarkable length and obliquity of the first costal streak.

Larva moderately attenuated from second segment throughout, head much narrower than second segment, semi-oval; pale whitish-green; head light brownish. Mines an irregular loose flat discoloured blotch in leaves of *Pultenæa sp.*--(?) (*Leguminosæ*), under surface slightly contracted. Pupa in a firm cocoon outside the mine. The food-plant is not common, and being unable to find a specimen in blossom, I did not identify the species; I collected some number of the larvæ near Sydney in July, but only bred one imago, early in September.

Grac. alysidota, Meyr.

Larva mines a flat irregular discoloured blotch beneath upper surface of phyllodia of *Acacia longifolia* (*Leguminosæ*). Pupa in an elongate flat white cocoon on surface of phyllodium between contracted edges. I found one larva only of this species, which I consequently could not describe, in July, and bred the imago in September.

Grac. didymella, Meyr.

Larva moderately attenuated posteriorly, not flattened; dull greyish-yellowish, head suffused with blackish. Mines a large irregular elongate blotch in phyllodia of *Acacia longifolia*, (*Loguminosæ*); blotch bladderlike, both surfaces inflated, not discoloured, walls thick, fleshy. Pupa in a flat white cocoon in an angle of a bent phyllodium. The mine is readily distinguished from that of *G. alsidota* on the same tree by the inflation and thickness of the walls. I found the larva tolerably common near Sydney in July, and bred eight specimens at the end of August and beginning of September. The species does not vary, and is

certainly distinct from *G. ochrocephala*, Meyr., and *G. nereïs*, Meyr., which probably feed on other species of *Acacia*.

Lithocolletis, Z.

Head roughly tufted on crown, forehead and face smooth; no ocelli; tongue moderate. Antennæ nearly as long as forewings, slender, filiform. Maxillary palpi obsolete. Labial palpi rather short, straight, drooping, second joint smooth, terminal joint pointed. Forewings elongate, moderately narrow, pointed. Hindwings narrowly lanceolate, less than half forewings, cilia four times as broad. Posterior tibiæ hairy above and below. Forewings with 7 veins, 3 branches to costa, cell closed, 1 simple. Hindwings without cell, median two-branched.

Larva fourteen-legged, mining blotches in leaves. Pupa naked or in a cocoon, always enclosed in the mine.

The species here described is not truly Australian, or at any rate does not belong to the indigenous fauna, so that my remarks on this subject remain in force; it has been introduced with its foodplant. The genus is readily distinguished from *Gracilaria*, to which it is most allied, by the tufted head and simpler neuration, in respect of which this species is perfectly typical, the venation not differing in the least from that of European species.

Lith. aglaozona, n. sp.

♂ ♀. 1½″-2¼″. Face shining coppery-black, tuft of head deep black. Palpi dark fuscous. Antennæ black, apex white. Thorax shining coppery-metallic. Abdomen brassy-blackish, beneath brassy-metallic. Legs dark fuscous. Forewings shining ochreous-orange; base conspicuously black; four costal and three dorsal subquadrate violet-silvery-metallic strongly black-margined spots; first costal spot at one-fourth, second in middle not oblique, first and second dorsal spots exactly opposite them, almost or sometimes quite uniting with them to form straight direct fasciæ; third costal spot somewhat before three-fourths,

rather inwardly oblique; third dorsal on anal angle, rather beyond third costal, erect; fourth costal spot somewhat inwardly oblique, close before apex, adjoining a round black apical spot: cilia dark grey, basal third within a black line blackish round apex. Hind-wings dark fuscous-grey, cilia dark grey.

A magnificent species, though some specimens are amongst the very smallest of the *Lepidoptera;* it is undoubtedly allied to the North American *L. desmodiella*, Clem., differing, so far as can be judged from the description, principally in the orange ground-colour, deep black base, and somewhat differently arranged markings.

Larva gradually attenuated from second segment throughout, head triangular, much smaller than second segment; glossy whitish, dorsal vessel dark green; head faintly amber-tinged. Mines a small blotch beneath lower surface of leaves of *Desmodium sp.*—(*Leguminosæ*), the epidermis contracting to produce a dilated chamber. Pupa free within the mine. I found the larva early in March in the Botanical Gardens, Sydney, and bred the imago in abundance towards the end of the same month, and also took them sitting on the leaves of the food-plant.

I hope to obtain further information on the origin of this species. There are only two specimens of the food-plant in the gardens, without name or indication of country, and I have not seen it elsewhere; I believe it to be a true *Desmodium*. The insect is certainly of an American type, but I have found no other instance of a leaf-feeding *Micro* being imported from such a distance, though it would not seem impossible; I am not aware of any described American species with which it is identifiable. Possibly it may come from the islands.

LYONETIDÆ.

Stegommata, Meyr.

Steg. sulfuratella, Meyr.

Larva mines an irregular slightly inflated discoloured blotch occupying apical half of leaves of *Banksia integrifolia* (*Proteaceæ*) ejecting excrement through several small holes, in April. Pupa in a very slender close white cocoon, suspended in the air by stretched threads from each end.

The habit of the pupa is, so far as I know, quite peculiar in the family.

CEMIOSTOMA, Z.

Head smooth, rarely with erect hairs behind; no ocelli; tongue rudimentary. Antennæ shorter than forewings, filiform, with a moderately large eyecap. No palpi. Forewings elongate, moderately narrow, pointed, apex rather produced. Hindwings linear-lanceolate, much narrower than forewings, cilia four times as broad. Forewings with 7 or 8 veins; 2 or 3 branches to costa, cell open or finely closed, 1 simple. Hindwings without cell, median three-branched.

Larva sixteen-legged, mining large flat blotches in leaves, or galleries under cuticle of shoots. Pupa in a silken, often ridged, cocoon, usually without the mine.

This genus has not hitherto been observed outside Europe, where are about a dozen closely allied species. There is no doubt that the following species is a true *Cemiostoma*, though I have not yet been able to examine the neuration. The genus is well distinguised by the smooth head and absence of palpi.

Cem. chalcocycla, n. sp.

♂. 3″-3¼″. Head, antennæ, thorax, abdomen and legs snow-white. Forewings snow-white; a slender very oblique dark fuscous streak from costa at two-thirds, reaching half across wing; a second, much shorter and much less oblique, in costal cilia at five-sixth; a third as short as second, inwardly oblique, in costal cilia immediately before apex; a smal roundish brassy-metallic spot on anal angle, margined anteriorly and posteriorly

by a blackish line, and above by a small pale yellowish indistinctly grey-marginal spot, faintly produced into cilia above apex; a minute round black apical dot; cilia white, with a grey projecting line above apex, besides the lines in costal cilia. Hindwings and cilia white.

The absence of any oblique yellowish costal spot readily separates this insect from the European species, which in other respects it closely resembles.

Four specimens beaten from bush, at Warragul in Gippsland, Victoria, in September, and at about 2,000 feet up Mount Wellington, Tasmania, early in February.

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Read Wednesday, October 25th, 1882.

Descriptions of Australian Micro-Lepidoptera.

By E. Meyrick, B.A.

VIII. OECOPHORIDÆ.

The *Oecophoridæ* are the most extensive family of *Lepidoptera* in Australia. I have at present about 450 species from this region, but the number increases daily, and the total of those inhabiting Australia alone cannot be less than 2,000. A first instalment of these is here given, and the rest will follow in due order.

In a paper recently communicated to the Entomological Society of London I have explained fully the views which I hold as to the limits and relative classification of this and the allied families, formerly included under the head of the *Gelechidæ*, into which I need therefore not enter here. The internal classification of the family was a task of considerable difficulty, but I believe the results arrived at, though doubtless susceptible of modification in details, will be found in the main satisfactory. From the rest of the world only 13 genera, containing about 120 species, have been described, and only two of these (*Pleurota* and *Oecophora*) have been found to occur here, the great mass of the species belonging to entirely new genera, of which I have been obliged to form 67. These undoubtedly form a closely united group, of which the various members are arranged in numerous divaricating branches on a short stem. From this close interconnection, as well as the great abundance of the group, I infer with confidence that Australia has been their centre of development, and that those

genera which are found elsewhere, if not stragglers from this centre, may be regarded as very old.

With the exception of one South American genus (*Gonionota*) nearly allied to the New Zealand *Semiocosma*, the family is hardly known as yet outside Europe and North America. Nearly all the genera of these regions are derivable from *Oecophora* and *Pleurota*, which, on the grounds recently pointed out, may be assumed to be very old. The exceptions are *Anchinia* and *Cacochroa*, allied to *Trachypepla*; *Hypercallia*, allied to *Peltophora*; and the single European species of *Peltophora*; all these together number only half-a-dozen species, and they may possibly be stragglers, a point which can only be determined by a knowledge of other regions. The relationship between the Australian and New Zealand genera will be discussed elsewhere; it will be sufficient here to remark that the only genus considerably developed in both lands is *Oecophora*, whose antiquity is thus further corroborated.

The special developmental origin of each genus, so far as it can be traced with probability, will be indicated in each case in the general remarks; and anyone can therefore, if he pleases, draw up for himself a genealogical table to express my conclusions, which are offered as probable only. It may, however, be of assistance, if I here sum up briefly the general lines of development of the family. The oldest existing genus is *Oecophora*; immediately connected with this is *Phloeopola*; thence arise collaterally *Eulechria* and *Philobota*; from *Philobota* originates the extensive group including *Peltophora* and *Coesyra*; from *Philobota* also, through *Heliocausta*, is derived *Hoplitica*, and through *Eochroa*, *Palparia*. The remaining genera can be arranged in groups round these centres.

The most valuable structural character for classification is afforded by the termination of vein 7 of the forewings, by which the family is divided into two main natural groups; in the first

(genera 1–60) this vein terminates in the hindmargin or apex, in the second (genera 61–70) in the costa. Usually this point is easily discernible, but occasionally the wing is so rounded that it is hard to determine where the apex really is; for this allowance must be made. The important points of neuration can be made out easily in all but the smallest species on the underside without unscaling; I have however denuded for examination specimens of 300 of the species described. Next to this the antennal characters are most important, especially the presence or absence of the basal pecten. This structure is fragile and liable to denudation, so that observation of more than one specimen is needed to ensure accuracy; yet in species which possess this pecten, it is uncommon to find even worn specimens showing no trace of it. The length of the antennal ciliations is also of considerable value. Other important points are the approximation of vein 5 of the hindwings to 4 at base, the scaling and length of the labial palpi, the possession of a thoracic crest, and the form of the hindwings with the relative length of their cilia. The maxillary palpi and ocelli are practically identical throughout the family, and though occasionally obsolete, offer in my opinion no tangible generic characters.

In the following descriptions, a number placed after the description of the antennal ciliations indicates the length of the ciliations in terms of the breadth of the stalk of the antennæ; e. g., 3–5 signifies that the ciliations are from three to five times as long as the breadth of the antennal stalk. Similarly, a number after the cilia of the hindwings denotes the length of the cilia in terms of the breadth of the hindwings. At the request of Prof. Zeller, I have given a Latin diagnosis of each species. The measurements I shall give henceforth in millimétres (roughly, 25 mm. = 1 inch), which are universally understood, and not liable to misinterpretation. At the end of the family an index of the specific names and synonyms will be added, and reference made to such published descriptions of Walker and

others as are for any reason unidentifiable. New Zealand species which have been already described are here indicated by a diagnosis only, as they will be fully described in the Transactions of the New Zealand Institute.

OECOPHORIDÆ.

Head with loosely appressed hairs, forming a tuft on each side of crown. Ocelli usually present, sometimes concealed. Tongue well developed. Antennæ moderate, shorter than forewings, filiform, in male regularly ciliated, basal joint frequently with a pecten of long closely-set hair-scales. Maxillary palpi usually distinct, small, simple, transversely appressed to face above tongue, rarely obsolete. Labial palpi well-developed, curved, ascending, acutely pointed. Thorax smooth or sometimes crested. Forewings oblong or elongate. Hindwings not broader (rarely slightly broader) than forewings, sometimes much narrower, elongate-ovate or lanceolate, hindmargin sometimes sinuate, cilia moderate or long (rarely short). Abdomen moderate or broad, often strongly margined. Posterior tibiæ usually clothed with long hairs. Forewings with 12 veins (rarely 11 by coalescence of 7 and 8), 7 and 8 stalked, 7 to costa, hindmargin, or apex, rarely 2 and 3, or 3 and 4 stalked, 2 from angle of cell or not far before it, 1 furcate at base, upper fork rarely partially obsolete. Hindwings with 8 veins, 3 and 4 from a point (very rarely slightly remote or short stalked), 5 sometimes bent, 6 and 7 parallel.

Larva sixteen-legged, rather stout, usually with complex marbled markings in the first group, more simply marked in the second, habits very various.

In general this family may be distinguished from the *Depressaridæ* by the ciliated antennæ, from the *Cryptolechidæ* by the parallel veins 6 and 7 of the hindwings, from the *Gelechidæ* by the ciliated antennæ and regularly-veined normal hindwings, from the *Dasyceridæ* by the naked antennæ, from the *Glyphipterygidæ* by the ciliated antennæ and stalking of veins 7 and 8 of the fore-

wings, from the group of families allied to the *Tineidæ* by the origin of veins 3 and 4 of the hindwings from a point, and from the other more lowly-organised families (*Elachistidæ*, &c.) by the twelve-veined forewings and eight-veined hindwings.

The following is an accurate tabulation of the genera; I have included in it all the European and other genera, to ensure a thorough comprehension of the scheme. The Australian and New Zealand genera are numbered in order of their position; of the rest the position is indicated by letters (a, b, &c.) affixed to the number of the nearest preceding Australian genus. The arrangement of the tabulation will, I think explain itself; succession is denoted by numbers, and collateral relation by letters; thus 1a may be divided into 2a and 2b, each of these into 3a and 3b (or more subdivisions, as 3c, &c), and so on.

1a. Forewings with 11 veins, 7 and 8 being coincident.	
2a. Terminal joint of palpi as long as second	11. Atelosticha.
2b. ,, ,, ,, half as long as second	22. Allodoxa.
1b. Forewings with 12 veins, 7 and 8 stalked.	
2a. Vein 7 of forewings to hindmargin.	
3a. Terminal joint of palpi concealed.	
4a. Second joint of palpi rough above ...	45a. Holoscolia.
4b. ,, ,, ,, not rough above	45c. Protasis.
3b. Terminal joint of palpi apparent.	
4a. Second joint of palpi with a tuft of hairs or with rough projecting scales above or beneath.	
5a. Antennæ of male with long fine cilia(3).	
6a. Basal joint of antennæ without pecten	44. Thalerotricha.
6b. ,, ,, ,, with strong pecten.	
7a. Second joint of palpi evenly rough-haired	45d. Topeutis.
7b. ,, ,, ,, with a more or less projecting tuft beneath	1. Palparia.

5b. Antennæ of male moderately ciliated (1).
6a. Second joint of palpi with projecting scales above.
7a. Second joint of palpi rough above throughout ... ... 46. Pleurota.
7b. Second joint of palpi rough above near apex only.
8a. Veins 3 and 4 of hindwings slenderly remote at base ... ... 39. Thyrsopala.
8b. Veins 3 and 4 of hindwings from a point 43. Protomacha.
6b. Second joint of palpi smooth above.
7a. Second joint of palpi beneath with a long well-defined tuft ... ... 47. Atheropla.
7b. Second joint of palpi beneath with a loose spreading tuft ... ... 45. Saropla.
7c. Second joint of palpi beneath with roughly projecting hair-scales... ... 48. Coeranica.
4b. Second joint of palpi at most loosely scaled.
5a. Anterior tibiæ and tarsi strongly dilated with scales.
6a. Antennæ of male with long fine cilia(4.) 4. Lepidotarsa.
6b. „ „ moderately strongly ciliated (2) ... ... 57. Crepidosceles.
5b. Anterior tibiæ and tarsi not dilated.
6a. Thorax with a crest of scales.
7a. Antennæ of male very shortly ciliated($\frac{1}{2}$)
8a. Cilia of hindwings $\frac{1}{6}$ ... ... 3. Eclecta.
8b. Cilia of hindwings $\frac{3}{4}$ ... ... 20. Machetis.
7b. Antennæ of male moderately strongly ciliated ($1\frac{1}{2}$) ... ... 52. Epipyrga.
6b. Thorax smooth.

7a. Antennæ of male with long fine cilia (2½–5).
8a. Vein 5 of hindwings strongly approximated to 4 at base .. .. 9. Euchætis.
8b. Vein 5 of hindwings nearly parallel to 4.
9a. Basal joint of antennæ without pecten.
10a. Hindwings much narrower than forewings, cilia more than 1 ... ... 49. Eulachna.
10b. Hindwings almost or quite as broad as forewings, cilia less than 1.
11a. Terminal joint of palpi not much shorter than second ... ... 37. Compsotropha.
11b. Terminal joint of palpi less than half second.
12a. Palpi very long... ... ... 40a. Hypercallia.
12b. Palpi short ... ... 50. Aristeis.
9b. Basal joint of antennæ with pecten.
10a. Terminal joint of palpi roughened with scales anteriorly ... ... 5. Eochroa.
10b. Terminal joint of palpi slender, smooth.
11a. Terminal joint of palpi as long as second. 23. Petalanthes.
11b. Terminal joint of palpi shorter than second.
12a. Veins 2 and 3 of forewings from considerably before angle of cell ... ... 42. Orophia.
12b. Veins 2 and 3 of forewings rising close to angle ... ... 41. Peltophora.
7b. Antennæ of male moderately ciliated (1-2)
8a. Basal joint of antennæ without pecten, or with one or two fugitive scales.
9a. Second joint of palpi dilated with projecting scales beneath beyond middle... 7. Zonopetala.
9b. Second joint of palpi evenly and almost smoothly scaled.

10a. Basal joint of posterior tarsi excessively long, stout ... ... 18. Leistarcha.
10b. Basal joint of posterior tarsi moderate, slender.
11a. Abdomen broadly dilated and rather flattened ... ... 10. Euryplaca.
11b. Abdomen moderate ... ... 8. Heliocausta.
8b. Basal joint of antennæ with strong pecten.
9a. Head densely tufted, hairs projecting between antennæ ... ... 38. Eriodyta.
9b. Head with loosely rough or appressed hairs, rarely projecting.
10a. Upper fork of vein 1 of forewings partially obsolete ... ... 56. Oxythecta.
10b. Upper fork of vein 1 of forewings distinct.
11a. Hindwings ovate-lanceolate, pointed, cilia exceeding 1.
12a. Hindwings acute ... ... 60. Machæritis.
12b. Hindwings obtusely-pointed ... ... 59. Haplodyta.
11b. Hindwings elongate-ovate, cilia less than 1
12a. Second joint of palpi exceeding base of antennæ.
13a. Antennæ of male biciliated with tufts (2) 34. Antidica.
13b. Antennæ of male evenly ciliated (1-1½).
14a. Middle tibiæ much thickened with rough hairs ... ... 36. Leistomorpha.
14b. Middle tibiæ smoothly scaled.
15a. Second joint of palpi very long ... 40. Philonympha.
15b. Second joint of palpi moderate ... 35. Philobota.
12b. Second joint of palpi not exceeding base of antennæ.
13a. Veins 3 and 4 of forewings short-stalked 55. Heterozyga.

13b. Veins 3 and 4 of forewings separate.
14a. Head loosely haired, hairs projecting over forehead ... ... 33. Nephogenes.
14b. Head smooth, hairs not projecting ... 51. Coesyra.
7c. Antennæ of male very shortly ciliated ($\frac{1}{4}$ to $\frac{1}{2}$).
8a. Palpi short, terminal joint half as long as second ... ... 54. Microbela.
8b. Palpi moderate, terminal joint not much shorter than second ... ... 53. Brachynemata.
2b. Vein 7 of forewings to apex.
3a. Thorax crested.
4a. Anterior tibiæ and tarsi dilated with dense scales ... ... 31. Piloprepes.
4b. Anterior tibiæ and tarsi not dilated.
5a. Basal joint of antennæ without pecten, or with one or two fugitive scales.
6a. Antennæ of male stout, minutely ciliated ($\frac{1}{4}$) ... ... 29. Sphyrelata.
6b. Antennæ of male moderately ciliated (1) 28. Phloeopola.
5b. Basal joint of antennæ with strong pecten.
6a. Second joint of palpi dilated before apex with rough scale beneath ... .. 19. Oenochroa.
6b. Second joint of palpi evenly scaled ... 21. Placocosma.
3b. Thorax smooth.
4a. Forewings with tufts of raised scales.
5a. Second joint of palpi much dilated with scales towards apex ... ... 31a. Anchinia.
5b. Second joint of palpi not dilated.
6a. Ciliations of antennæ in male short, even 32. Trachypepla.
6b. Ciliations of antennæ in male long, fine, fasciculated ... ... 16. Atomotricha.
4b. Forewings smooth.
5a. Antennæ of male with long fine cilia (3-7).

6a. Second joint of palpi with a short angular apical projection beneath ... 26. Ioptera.
6b. Second joint of palpi brush-like beneath towards apex ... ... 17. Brachysara.
6c. Second joint of palpi evenly scaled.
7a. Second joint of palpi exceeding base of antennæ, terminal joint as long ... 24. Linosticha.
7b. Second joint of palpi not reaching base of antennæ, terminal joint shorter ... 27. Macronemata.
5b. Antennæ of male moderately ciliated (1-2).
6a. Second joint of palpi with rough projecting scales beneath towards apex ... 25. Phriconyma.
6b. Second joint of palpi evenly scaled.
7a. Terminal joint of palpi less than half second ... ... 30. Hieropola.
7b. Terminal joint of palpi not much shorter than second.
8a. Basal joint of antennæ without pecten, or with one or two fugitive scales ... 14. Hoplitica.
8b. Basal joint of antennæ with strong pecten ... ... 15. Eulechria.
5c. Antennæ of male very shortly ciliated ($\frac{1}{3}$)
6a. Second joint of palpi shortly tufted beneath ... ... 12. Nymphostola.
6b. Second joint of palpi evenly scaled ... 13. Proteodes.
2c. Vein 7 of forewings to costa.
3a. Terminal joint of palpi with median posterior tooth of scales.
4a. Thorax crested ... ... 62a. Gonionota.
4b. Thorax smooth ... ... 62. Semiocosma.
3b. Terminal joint of palpi smooth.
4a. Second joint of palpi with rough projecting scales beneath.

5a. Terminal joint of palpi as long as second.

6a. Veins 3 and 4 of hindwings stalked ... 61. Aochleta.

6b. Veins 3 and 4 from a point ... ... 6. Euphiltra.

5b. Terminal joint of palpi much shorter than second.

6a. Antennæ of male with long fine ciliations (2-3). ... ... 63a. Harpella.

6b. Antennæ of male very shortly ciliated ($\frac{1}{3}$) 2. Enchocrates.

4b. Second joint of palpi without projecting scales.

5a. Antennæ of male with long fine cilia (3-4).

6a. Hindwings as broad as forewings, palpi rather long ... ... 63. Leptocroca.

6b. Hindwings narrower than forewings, palpi moderately short.

7a. Hindwings ovate-lanceolate, cilia 1–$1\frac{1}{4}$ 66. Crossophora.

7b. Hindwings lanceolate, acute, cilia $2\frac{1}{2}$–3 70. Satrapia.

5b. Antennæ of male moderately ciliated ($\frac{1}{2}$–$1\frac{1}{2}$).

6a. Basal joint of antennæ very elongate and attenuated ... ... 69. Macrobathra.

6b. Basal joint of antennæ moderately short and broad.

7a. Basal joint of antennæ without pecten.

8a. Hindwings narrow ovate-lanceolate ... 67. Ochlogenes.

8b. Hindwings elongate-ovate ... ... 64. Gymnobathra.

7b. Basal joint of antennæ with pecten.

8a. Hindwings with an expanded spherical tuft of hairs at base ... ... 68. Disselia.

8b. Hindwings without basal tuft.

9a. Antennal pecten strong, ciliations 1-$1\frac{1}{2}$ 65. Oecophora.

9b. Antennal pecten fugitive, ciliations $\frac{1}{2}$... 62b. Psecadia.

1. Palparia, Wing.

Head with appressed scales, sometimes projecting somewhat between antennæ, side tufts rather short, more or less loosely appressed. Antennæ moderate, in male with long fine ciliations (3–5); basal joint stout, with strong pecten. Palpi moderately long, second joint often exceeding base of antennæ, densely scaled, with a long or short dense projecting triangular tuft beneath at apex; terminal joint shorter than second, strongly reflexed, somewhat roughened anteriorly. Thorax smooth. Forewings elongate or broad, costa often strongly arched, apex acute or falcate, hindmargin straight or sinuate, oblique. Hindwings as broad as forewings, ovate or elongate-ovate, hindmargin more or less distinctly sinuate beneath apex, cilia $\frac{1}{4}$–$\frac{1}{2}$. Abdomen rather stout. Legs smoothly scaled, posterior tibiæ clothed with long fine hairs. Forewings with vein 7 to hindmargin slightly below apex, 2 from somewhat before angle of cell. Hindwings normal.

The long ciliations of the antennæ, and the definite tuft of the palpi, combined with the termination of vein 7 on hindmargin, and the basal pecten of the antennæ, separate this genus at once from all others. The structure of the palpi is however subject to considerable variation, the tuft being in some species long and acute, in others very short and obtuse, and the relative length of the terminal joint also varies much. The species also differ greatly in the breadth and form of the forewings. All these differences are, notwithstanding, merely specific, and although at first the extreme forms of the genus appear to have little resemblance, yet the whole forms an intimately allied group, very distinct and easily recognisable. The genus, with its allies, is connected with the more ordinary forms of the family through *Eochroa*.

The species are of moderate or large size, always elegant, and often handsomely coloured with orange and rosy tints. The

larvæ are imperfectly known, but appear to feed between spun twigs and leaves. The genus is confined to Australia, and at present contains thirteen species, which may be distinguished as follows:

A. Apex of forewings not projecting, hindmargin slightly rounded ... ... 2. *lambertella.*
B. Apex of forewings more or less projecting, hindmargin sinuate.
 1. Costa of forewings sinuate, bent towards base ... ... 7. *micrastrella.*
 2. Costa of forewings strongly convex.
  a. Forewings deep yellow, with rosy costal patch ... ... 3. *hesperidella.*
  b. Forewings whitish-yellow, rosy-suffused 4. *rectiorella.*
  c. Forewings rosy-grey ... ... 5. *thalamia.*
 3. Costa of forewings moderately or gently arched.
  a. Forewings rosy-ochreous ... ... 6. *eonephella.*
  b. Forewings greyish-fuscous ... ... 8. *euryphanella.*
  c. Forewings reddish-fuscous.
   i. Tuft of palpi long ... ...10. *uncinella.*
   ii. Tuft of palpi very short ... ... 9. *semijunctella.*
  d. Forewings dark fuscous lined with white 11. *aulacoïs.*
C. Apex of forewings strongly produced, falcate
 1. Forewings broad, orange-yellow... ... 1. *aurata.*
 2. Forewings narrow, grey.
  a. A black streak from disc to apex ...12. *falcifera.*
  b. No black apical streak... ... ...13. *hirax.*

1. *Palp. aurata*, Walk.

(*Palparia aurata*, Walk., Brit. Mus. Cat. 775).

Magna, alis ant. falcatis, aurantiacis, antice roseo-suffusis, linea longitudinali curva lunulaque media roseis, ciliis roseo-brunneis; post. flavis.

♂. 34–36 mm. Head deep ochreous-yellow, face rosy-tinged. Palpi with tuft of second joint dense, porrected, as long as terminal joint; second joint and tuft deep ochreous-yellow, paler internally, at base white beneath, tuft towards extremity or wholly carmine-tinged; terminal joint pale ochreous, anterior edge dark carmine-fuscous. Antennæ whitish-ochreous. Thorax varying from ochreous to carmine-pink. Abdomen whitish-ochreous, anal tuft yellowish-ochreous. Legs carmine-pink, anterior and middle tibiæ and tarsi suffused above with dark fuscous except at apex of tarsal joints, posterior tibiæ pale yellow. Forewings broad, costa very strongly arched, especially towards apex, apex very strongly produced and falcate, hindmargin very obliquely rounded beneath; golden-yellow, basal two-thirds generally more or less suffused with carmine-pink; costa and inner margin slenderly carmine-pink throughout; a slender, rather upwardly-convex, fuscous-carmine longitudinal line rather above middle from near base to apex, most distinct beyond middle; an indistinct transverse crescentic carmine-pink mark in disc at $\frac{2}{3}$, its apex meeting the longitudinal line: cilia deep dull carmine-pink, suffused with dark grey round apex. Hindwings elongate-ovate, hindmargin slightly sinuate; pale yellow, rather deeper posteriorly; cilia whitish-yellow, becoming carmine-pink round apex.

A handsome and conspicuous insect, distinguished from the other large yellow species of the genus by the peculiar strongly-falcate apex of the forewings, and the longitudinal line.

Apparently not common, but sluggish in habit, as are most of the genus; occurs at Blackheath on the Blue Mountains (3,500 feet), and near Melbourne, in November; also on Mount Lofty Range, South Australia.

2. *Palp. lambertella*, Wing.

Maxima, alis ant. margine postico rotundato, roseis, nitidis, linea mediana plicaque submediana dilute flavis; post. dilute flavis, apice roseo.

♀. 47 mm. Head golden-yellow, sides of face and back of crown carmine-pink. (Palpi broken.) Antennæ blackish-grey, becoming carmine-pink at base. Thorax carmine-pink. Abdomen whitish-yellow. Legs whitish-yellow, anterior tibiæ and tarsi above carmine-pink suffused with dark grey; middle tibiæ above carmine-pink with a broad suffused pale yellow median band, tarsi carmine-pink. (Posterior legs broken). Forewings broad, costa very strongly and evenly arched, apex bluntly rectangular, hindmargin obliquely rounded; uniform glossy carmine-pink; costal edge from near base almost to apex, and dorsal edge from middle of inner margin to middle of hindmargin very slenderly yellow-whitish; a well-defined slender pale yellow line along fold from base to anal angle; base of wing above this line suffusedly yellow; a straight longitudinal pale yellow line through middle of disc from $\frac{1}{3}$ almost to hindmargin beneath apex: cilia pale carmine-pink, darker at apex, becoming orange along costa; under surface of cilia with a blackish apical spot. Hindwings ovate, hindmargin rounded; whitish-yellow, posteriorly carmine-tinged, apex carmine-pink; cilia whitish-yellow, becoming carmine-pink round apex, with a blackish-grey apical spot.

This very striking and beautiful species is prominently distinguished by its very large size, and shining carmine-pink forewings; the rounded hindmargin is peculiar in the genus.

I only possess one specimen, which I received through the kindness of Dr. J. C. Cox, who believes it to have been taken near Sydney. The British Museum has several specimens, supposed to come from the same place.

I have not been able to refer to Wing's original description, and have had to rely on the identification of Walker, who can however hardly have gone wrong in this case.

3. *Palp. hesperidella*, n. sp.

Magna, alis ant. margine postico sinuato, flavis, spatio costali antice roseo; post. albidis, apice flavido.

♂ ♀. 24–28 mm. Head deep ochreous-yellow, face carmine-tinged. Palpi with tuft of second joint dense, porrected, rather longer than terminal joint; second joint and tuft deep orange-carmine, becoming yellow internally, whitish above; terminal joint blackish-grey in front, whitish behind. Antennæ whitish, suffusedly ringed with fuscous-grey. Thorax orange-carmine, yellower posteriorly. Abdomen ochreous-whitish. Anterior and middle tibiæ and tarsi dark fuscous, beneath ochreous-whitish tinged with carmine; posterior tibiæ and tarsi ochreous-whitish, beneath carmine-tinged and irrorated with grey. Forewings broad, costa strongly and evenly arched, apex acute, not produced, hindmargin slightly sinuate, obliquely rounded; uniform bright deep yellow; extreme costal edge blackish-grey from base to $\frac{1}{4}$, thence to apex whitish-yellow; a tolerably well-defined triangular pale carmine-pink patch extending along costa from near base to $\frac{2}{3}$, in middle reaching nearly half across wing, its lower edge parallel to inner-margin, and its posterior edge parallel to hind-margin: cilia glossy carmine-pink, darkest at apex, costal cilia pale yellow, tips of apical cilia dark grey. Hindwings elongate-ovate, hindmargin rounded; yellow-whitish, apex slightly more yellowish; cilia yellow-whitish, faintly carmine-tinged.

Readily known by the clear deep yellow forewings and well-defined rosy costal patch.

Taken not uncommonly at Blackheath on the Blue Mountains (3,500 feet), and also occasionally near Sydney, in October and November.

Walker described a specimen of this species as var. B. of *Palp. aurigena* (=*P. rectiorella*).

4. *Palp. rectiorella*, Walk.

(*Palparia rectiorella*, Walk., Brit. Mus. Cat. 775; *Palparia aurigena*, ibid. 775; *Palparia confectella*, ibid. 776.)

Magna, alis ant. margine postico sinuato, dilute flavidis, leviter roseo-suffusis; post. albidis, margine postico anguste roseo.

♂. 31 mm. Head whitish-yellow, partially rosy-suffused. Palpi with tuft of second joint dense, porrected, as long as terminal joint; second joint and tuft whitish-yellow, deeper at base, with a suffused dark reddish-fuscous central band, and lower portion of tuft tinged externally with reddish-fuscous; terminal joint ochreous-carmine in front, white behind. Antennæ yellowish-whitish, slightly carmine-tinged towards base. Thorax whitish-yellow, suffused with pale carmine. Abdomen whitish-yellowish. Anterior and middle tibiæ and tarsi dark carmine-fuscous, beneath yellowish-whitish tinged with carmine; posterior tibiæ whitish-yellow, tarsi yellowish-whitish, beneath suffused with pale carmine. Forewings broad, costa strongly and evenly arched, apex acute, not produced, hindmargin slightly sinuate, oblique; whitish-yellow, delicately mixed with pale carmine, more strongly suffused with pale carmine towards basal two-thirds of inner margin; costa and inner margin slenderly clear pale yellow; base of costa brownish: cilia whitish-yellow, becoming pale carmine towards apex of wing. Hindwings elongate-ovate, hindmargin rounded; whitish, hindmarginal edge pale carmine; cilia whitish, more yellowish round apex.

Nearly allied to the preceding, which it resembles in form, but is much paler, slightly rosy throughout, but without the distinct rosy costal patch, and with hindmargin of hindwings rosy.

I have received two specimens, said to have been taken near Sydney. One of Walker's specimens is stated to be from Tasmania. Although not possessing a female for description, I have seen that sex, which does not differ from the male.

Walker's description of *P. rectiorella* is recognisable, and the types are truly this species; they are both females, though described by Walker as male. His *P. aurigena* includes three species; the male is described first, and is *P. rectiorella* (specimen *c.*); the female is *Heliocausta incarnatella*, Walk. (specimen *a.*); and the var. B. is *P. hesperidella* (specimen *b.*). *P. confectella* is represented by an ordinary male of this species.

5. *Palph. thalamia*, n. sp.

Media, alis ant. margine postico sinuato, dilute roseis, postice griseo-suffusis; post. dilute flavidis.

♂. 19½ mm. Head white. Palpi with tuft of second joint dense, broadly triangular, as long as terminal joint; white, second joint and tuft externally pale carmine except towards apex of joint. Antennæ dark grey, becoming whitish at base. Thorax whitish-grey, anteriorly white, posteriorly pale carmine-pink. Abdomen ochreous-whitish. Anterior tibiæ carmine-pink, tarsi dark fuscous; middle tibiæ carmine-pink, tarsi grey-whitish; posterior tibiæ and tarsi whitish. Forewings moderate, costa very strongly arched, apex somewhat produced, acute, hindmargin rather strongly sinuate beneath apex, thence very obliquely rounded; pale carmine-pink, faintly and irregularly suffused with whitish-grey, and irrorated with darker grey; costa suffusedly white towards base, on posterior half slenderly suffused with dark grey; a broad obscure grey suffusion towards posterior half of inner margin and hindmargin, becoming attenuated towards apex; apex rather brighter carmine; an obscure dark grey dot in disc beyond middle: cilia grey-whitish, greyer towards base, costal cilia dark grey. Hindwings with hindmargin faintly sinuate; whitish-yellowish, cilia whitish.

A distinct, but not conspicuous species, resembling the preceding in the strongly convex costa, and long tuft of palpi, but much smaller, and superficially more like *P. eonephella*, from which it differs in the grey posterior suffusion, the absence of any ochreous tinge, and the much paler hindwings, as well as structurally.

I have one fine specimen, taken by Mr. G. H. Raynor at Blackheath in the Blue Mountains (3,500 feet) in November.

6. *Palp. eonephella*, n. sp.

Minor, alis ant. margine postico sinuato, ochreis, roseo-suffusis, punctis duobus disci minimis maculaque apicis in ciliis nigris; post. griseis vel flavidis, apice roseo.

♂ ♀. 15½–16½ mm. Head whitish, faintly carmine-tinged. Palpi with tuft of second joint short, obtuse, hardly more than half terminal joint; second joint and tuft ochreous-carmine mixed with grey, apex of joint white, terminal joint white. Antennæ whitish, in female suffused with grey except at base. Thorax whitish-ochreous, with a broad central longitudinal ochreous-orange stripe. Abdomen whitish-ochreous, beneath and on sides carmine-tinged. Anterior and middle tibiæ carmine-pink, tarsi dark fuscous; posterior tibiæ and tarsi ochreous-whitish. Forewings moderate, costa moderately and evenly arched, apex somewhat produced, acute, hindmargin sinuate beneath apex, thence very obliquely rounded; varying from carmine-pink to ochreous-whitish faintly tinged with carmine, generally more ochreous-tinged towards disc and inner margin; a minute dark grey dot in disc before middle, and another beyond middle; towards hindmargin spaces between veins obscurely mixed with dark grey; cilia ochreous-whitish, becoming carmine-pink towards base, with a blackish spot on tips at apex. Hindwings with hindmargin slightly sinuate; grey, suffused towards apex with whitish-ochreous, in male sometimes almost wholly yellowish; apex slightly rosy-tinged; cilia whitish-ochreous.

The smallest species of the genus, distinguished by its rosy-ochreous colouring, discal dots, and dark spot in apical cilia.

Taken near Sydney from November to February, and at Brisbane in September, not commonly.

7. *Palp. micrastrella*, n. sp.

Major, alis ant. margine postico costaque sinuatis, griseo-ochreis, lituris costæ brevissimis nigris, puncto disci cano; post. griseis.

♂. 24 mm. Head whitish-ochreous. Palpi with tuft of second joint very short, angular, about ¼ of terminal joint; whitish-ochreous, second joint mixed with grey on sides, terminal joint

thickened with rough scales beneath, anteriorly suffused with dark grey. Antennæ ochreous-whitish, ciliations very long. Thorax ochreous-whitish, mixed with pale ochreous. Abdomen grey. Anterior tibiæ dark fuscous mixed with ochreous ; middle tibiæ ochreous with narrow dark fuscous median and terminal rings, extreme apex white ; posterior tibiæ grey-whitish ; all tarsi dark fuscous with whitish rings at apex of joints, basal joint of posterior tarsi whitish towards base. Forewings moderate, somewhat dilated posteriorly, costa strongly arched near base, thence nearly straight, slightly concave, hardly arched before apex, apex somewhat produced, acute, hindmargin oblique, rather strongly concave ; brownish-ochreous, very densely irrorated with ochreous-whitish, especially towards costa ; extreme costal edge whitish from $\frac{1}{4}$ to $\frac{3}{4}$; two short oblique waved cloudy dark fuscous lines from costa between base and $\frac{1}{4}$, reaching about $\frac{1}{3}$ across wing ; six very small black spots on costa between $\frac{1}{4}$ and apex at nearly equal distances ; some irregular dark fuscous scales on inner margin, and one or two in disc ; a distinct minute black dot in disc before middle, and a clear white dot in disc beyond middle : cilia brownish-ochreous, mixed with grey-whitish, and chequered with cloudy blackish-fuscous. Hindwings with hindmargin slightly sinuate ; pale grey, darker towards apex, with a darker central lunule ; cilia whitish-grey, mixed with dark grey.

A very peculiar species, with the tuft of the palpi as short as in *P. hirax* and *P. falcifera*, distinguished from all by the sinuate costa, ochreous-grey colouring, and white discal dot.

The larva feeds amongst spun twigs of *Exocarpus cupressiformis* (*Santalaceæ*), but is undescribed.

I have one specimen, and have seen a second, both bred by Mr. G. H. Raynor in September from larvæ found near Parramatta, New South Wales.

8. *Palp. euryphanella*, n. sp.

Media, alis ant. margine postico sinuato, griseo-fuscis, fasciis duabus angustis lituraque costæ media saturate fuscis; post. dilute flavis.

♀. 19½–22½ mm. Head grey, mixed with darker on crown, face whitish-grey. Palpi with tuft of second joint triangular, pointed, almost as long as terminal joint: second joint and tuft pale grey densely mixed with blackish-grey, terminal joint anteriorly blackish-grey, posteriorly whitish-grey. Antennæ grey ringed with blackish. Thorax greyish-brown, mixed with dark fuscous. Abdomen whitish-yellow, apex rosy-tinged. Legs dark fuscous-grey, finely irrorated with whitish-yellow; posterior tibiæ and basal joint of tarsi whitish-yellow above, other joints with whitish-yellow apical rings. Forewings moderate, strongly dilated posteriorly, costa slightly arched, apex rather produced, hardly acute, hindmargin rather oblique, rather strongly concave; whitish-grey, densely irrorated with dark fuscous, so as to appear brown-grey, slightly ochreous-tinged in disc and towards base of inner margin; extreme costal edge ferruginous-yellow from ¼ almost to apex; a slightly curved oblique cloudy dark fuscous transverse streak from ⅓ of costa to before middle of inner margin, posteriorly suffused into ground-colour, and dilated into a cloudy spot on middle of inner margin; an oblique short cloudy dark fuscous streak from middle of costa, reaching ⅓ across wing; a small indistinct dark fuscous spot between apex of this and inner margin; a cloudy dark fuscous streak from costa before apex to hindmargin before anal angle, nearly parallel to hindmargin, attenuated and indistinct above; an indistinct dark fuscous suffusion along hindmargin: cilia grey-whitish, becoming ochreous-tinged towards base, mixed with dark fuscous, and with a strong cloudy dark fuscous line before tips throughout, less distinct round anal angle; costal cilia ochreous-yellow, with four short oblique black dashes. Hindwings ovate, hindmargin slightly indented; pale yellow, with five indistinct blackish dots on hind-

margin on extremities of veins; cilia grey-whitish, very faintly carmine-tinged, towards inner margin pale yellowish.

Allied to *P. uncinella* and *P. semijunctella*, differing from both in the greyish tinge of the forewings, the two complete dark fuscous fasciæ, and the paler yellow hindwings.

I took one specimen at Launceston, Tasmania, in January, and have a second taken by Mr. G. H. Raynor at Warragul, Gippsland, in December.

9. *Palp. semijunctella*, Walk.

(*Tortricopsis semijunctella*, Walk., Brit. Mus. Cat., 777.)

Media, alis ant. margine postico sinuato, roseo-fuscis, lituris costæ brevissimis nigris; post. flavis, ciliis griseis.

♂ ♀. 21–23 mm. Head ochreous-whitish, tinged on crown with dull carmine. Palpi with tuft of second joint very short, angular, about ¼ of terminal joint; second joint and tuft deep reddish-ochreous-brown, whitish at apex of joint, terminal joint whitish, anteriorly slightly carmine-tinged. Antennæ pale greyish-ochreous. Thorax reddish-ochreous-brown, suffused with pale grey. Abdomen whitish-yellow, apex bright crimson; beneath crimson, segments suffused with dark grey towards base. Anterior and middle tibiæ deep crimson-fuscous, tarsi dark fuscous; posterior tibiæ and tarsi whitish-yellow. Forewings moderate, dilated posteriorly, costa very slightly arched, apex somewhat produced, acute, hindmargin oblique, rather concave beneath apex; reddish-ochreous-brown, more or less densely irrorated with grey-whitish and sometimes with grey, especially on disc; extreme costal edge paler; a cloudy dark fuscous mark on costa at ¼, tending to be faintly produced obliquely outwards; a blackish dot on costa slightly beyond middle, giving rise to a very faintly indicated oblique outwardly angulated fuscous-grey transverse line, ending in anal angle; between this and apex are two other black costal dots: cilia reddish-ochreous-brown, almost wholly

suffused with dark fuscous-grey. Hindwings ovate, hindmargin slightly sinuate; yellow, apex slightly infuscated; cilia dark grey, round inner angle pale yellow.

Nearly allied to *P. uncinella*, but readily known by the less dilated forewings, the whitish-grey irroration, the black costal dots, and the absence of the distinct blackish-fuscous costal spot; the forewings are also less ochreous, the cilia of hindwings darker, and especially the tuft of palpi very much shorter.

I have taken a single specimen near Sydney in December, and have received a second from Mr. G. Barnard, taken at Coomooboolaroo, near Duaringa, Queensland.

Walker's description is recognisable, and the type in fair condition.

10. *Palp. uncinella*, Z.

(*Cryptolechia uncinella*, Z., Linn. Ent. IX., 355, X., 146, T. I., fig. 1; *Tortricopsis rosabella*, Newm., Trans. Ent. Soc., Lond., III. N.S., 293.)

Media, alis ant. margine postico sinuato, ochreo-brunneis, costa anguste flava, macula costæ ciliisque externe nigris; post. flavis, ciliis roseo-suffusis.

♂ ♀. 21–23½ mm. Head grey, mixed with darker on crown, face whitish-grey. Palpi with tuft of second joint triangular, pointed, nearly as long as terminal joint; second joint and tuft ochreous-brown, at apex of joint grey, terminal joint grey. Antennæ grey. Thorax reddish-ochreous-brown. Abdomen whitish-yellow, beneath and at extremity above bright crimson. Anterior tibiæ and tarsi dark fuscous; middle tibiæ reddish-ochreous-brown, tarsi dark fuscous; posterior tibiæ whitish-yellow, tarsi with basal joint whitish-yellow above, dark fuscous beneath, other joints dark fuscous with whitish-yellow apical rings; middle and posterior coxæ crimson. Forewings moderate, posteriorly dilated, costa very slightly arched, apex somewhat produced, acute,

hindmargin oblique, rather strongly concave; reddish-ochreous-brown, slightly paler posteriorly; extreme costal edge yellow from near base almost to apex; an obscure fuscous suffusion towards middle of inner margin, indicating a darker spot; a small oblique somewhat wedge-shaped blackish-fuscous spot on costa at $\frac{3}{5}$, tolerably well-defined; from a little beyond apex of this to anal angle is an indistinctly indicated row of small reddish-fuscous marks: cilia with basal half deep reddish-ochreous, apical half light carmine-pink, with a strong cloudy black line just before tips, extending from above apex nearly to anal angle, thence obsolete. Hindwings ovate, hindmargin slightly indented below apex; light yellow; cilia whitish-grey tinged with carmine-pink, more yellowish towards base.

Characterised by the clear reddish-ochreous-brown ground colour, the yellow costal edge, and the conspicuous dark fuscous spot on costa beyond middle.

Rather common round Sydney and Melbourne in October and November, flying readily during the day; also at Launceston, Tasmania, in January.

Zeller's descriptions and figure undoubtedly refer to this species, which is however widely remote from *Cryptolechia*; his first specimen was without palpi, but it is remarkable that in the second he should have overlooked the conspicuous tuft of the second joint, unless it was worn away. Newman unnecessarily created the genus *Tortricopsis* to receive this species.

11. *Palp. aulacoïs*, n. sp.

Media, alis ant. subfalcatis, canis, leviter ochreo-suffusis, fascia antica nebulosa, litura costæ media, venisque omnibus nigris, fascia marginis postici angusta integra nivea; post. dilute flavis, apice ciliisque griseo-suffusis.

♂ ♀. 19½–20 mm. Head grey, sides of crown whitish. Palpi with tuft of second joint rather broad, about $\frac{3}{4}$ as long as terminal

joint; second joint and tuft dark grey, becoming whitish towards base and apex of joint, terminal joint anteriorly dark grey, posteriorly whitish. Antennæ whitish. Thorax rather dark grey. Abdomen whitish-ochreous. Anterior tibiæ and tarsi dark grey; middle tibiæ whitish with a broad dark grey band before apex, tarsi dark grey with whitish rings at apex of joints; posterior tibiæ and tarsi whitish. Forewings moderate, posteriorly dilated, costa very slightly arched, apex strongly produced, acute, hindmargin oblique, strongly concave; snow-white; all the veins marked with thick cloudy dark fuscous lines, coarsely and suffusedly on basal two-thirds, on apical third more sharply defined, reaching costa, but terminating abruptly a little before hindmargin; a cloudy greyish-ochreous suffusion between the veins towards hindmargin, ending abruptly with the veins a little below costa, leaving a narrow clear white marginal streak; space beneath fold suffused with dark fuscous-grey, except towards middle, and along inner margin from $\frac{1}{4}$ to $\frac{3}{4}$; an oblique cloudy ill-defined fuscous-grey streak from costa at $\frac{1}{3}$ to middle of inner margin, and a shorter similar streak from middle of costa to disc at $\frac{2}{3}$ from base; a sharply defined blackish hindmarginal line: cilia grey, mixed with grey-whitish. Hindwings with hindmargin distinctly sinuate beneath apex; pale ochreous-yellow, apex slightly infuscated; cilia yellow-whitish, with a suffused irregular dark grey line near base.

This very distinct and elegant species may be at once known by the white groundcolour and dark veins; in form it approaches *P. uncinella*, but the apex of the forewings is more produced. One of my specimens presents a curious deformity of venation on one forewing only, vein 4 being furcate towards extremity, and all the other veins being present, so that there are strictly 13 veins; the wing is quite normal in form, but it cannot be regarded as a natural variation; the colouring follows the irregularity.

Two specimens beaten from a *Cupressus* on the hills at Murrurundi, New South Wales, in November.

12. *Palp. falcifera*, n. sp.

Media, alis ant. angustis, falcatis, dilute griseis, costa roseo-suffusa, fasciis duabus angustis contortis, lineaque plicæ, altera disci, tertia apicis nigris, supra cano-marginatis ; post. griseis.

♂. 21 mm. Head whitish, Palpi with tuft of second joint very short, angular, terminal joint short, about half second joint; second joint and tuft grey, becoming whitish towards base and apex of joint, terminal joint whitish, anterior edge grey. Antennæ grey. Thorax grey. Abdomen grey mixed with whitish, beneath carmine-tinged. Anterior tibiæ and tarsi whitish; all coxæ crimson-tinged. Forewings rather narrow, costa moderately arched, apex very strongly produced, acute, hindmargin very oblique, strongly concave; grey, becoming rather lighter and more ochreous-tinged towards base of inner margin; costa rather broadly suffused with very pale carmine-pink from $\frac{1}{4}$ to apex; a straight rather irregular slender blackish-fuscous streak from base of costa to inner margin at $\frac{2}{3}$, ill-defined beneath, above edged by a suffused slender white streak, which is produced indistinctly to anal angle; a slender blackish-fuscous streak from costa at $\frac{1}{4}$ obliquely outwards, in middle of wing curved sharply inwards and meeting first streak beyond its middle; from angulation of this streak proceeds a slender blackish-fuscous upwardly convex streak through disc to beyond middle, thence curved abruptly downwards and ending in anal angle, discal portion margined above by a strong clear white streak; from a little above inner margin at $\frac{2}{3}$ an irregular blackish-fuscous streak to anal angle, meeting this streak; midway between the central discal streak and costa is a longitudinal row of scattered blackish scales; from the central discal streak beyond middle of disc proceeds a slender blackish-fuscous line towards costa, bent very obliquely outwards a little below costa, not reaching it, margined posteriorly by a suffused white and very pale carmine-pink streak extending downwards to anal angle; an irregular suffused blackish-fuscous spot in disc beyond this, connected with middle of hindmargin

by a blackish-fuscous line margined above with white ; from apex of this spot a slightly curved slender blackish-fuscous streak to apex of wing, margined above with white ; hindmargin blackish-fuscous immediately above anal angle : cilia whitish, mixed with pale grey, costal cilia grey. Hindwings elongate, hindmargin sinuate ; light grey ; cilia grey-whitish.

This and the following species differ from all the rest in the much narrower and more elongate wings ; the tuft of the palpi is very short, yet not shorter than in *P. micrastrella* and *P. semijunctella.* This species differs from the following widely in the complex markings of the forewings, and the grey hindwings.

I have one specimen, taken with two others by Mr. G. H. Raynor near Parramatta in August.

13. *Palp. hirax*, n. sp.

Media, alis ant. angustis, falcatis, griseis, costa circa medium cano-suffusa, linea obsoleta punctisque sex disci nigris, linea plicæ alteraque marginis postici nigris, supra cano-marginatis ; post. griseo-ochreis.

♂. 21 mm. Head whitish, mixed with grey on crown. Palpi with tuft of second joint very short, angular, terminal joint extremely short, hardly projecting beyond scales of second joint ; dark grey, apex of second joint whitish. Antennæ whitish. Thorax dark fuscous, anterior margin and shoulders white. Abdomen whitish-ochreous. Legs whitish, anterior tibiæ grey, all coxæ crimson-tinged. Forewings rather narrow, costa moderately arched, apex very strongly produced, acute, hindmargin concave, very oblique ; light grey, very finely irrorated with darker grey and whitish, becoming lighter and more ochreous-tinged towards costa and apex ; a straight slender well-defined clear white streak from costa very near base to anal angle, strongly margined beneath with blackish-fuscous shading into groundcolour ; below this streak the ground colour is clearer

grey, without ochreous tinge; a broad white suffusion towards middle of costa; a short longitudinal ill-defined blackish line in middle of disc, and six small ill-defined blackish spots arranged round it; first spot in disc before middle, second obliquly before and above first, third above central line, the other three in a crescentic transverse row beyond middle of disc; a slender white streak from anal angle along lower $\frac{2}{3}$ of hindmargin, margined anteriorly by a suffused blackish-fuscous streak, before which is a narrow whitish suffusion: cilia whitish, mixed with grey, becoming white beneath apex, costal cilia grey, becoming dark fuscous above apex. Hindwings elongate, hindmargin slightly sinuate; greyish-ochreous; cilia ochreous-whitish, mixed with grey round apex.

In form closely approaching the preceding, but the terminal joint of the palpi is remarkably short; well characterised by the single streak on the fold, and six discal spots.

One fine specimen beaten from *Eucalyptus* in November, near Sydney.

2. Enchocrates, *n. g.*

Head with appressed hairs, side tufts large, spreading. Antennæ in male moderate, very shortly ciliated ($\frac{1}{3}$), basal joint rather stout, without pecten. Palpi very long, second joint extremely long, nearly straight, obliquely ascending, dilated with rough projecting scales above and beneath, laterally compressed, terminal joint short, very slender, erect. Thorax smooth. Forewings oblong, moderately broad, apex rounded, hindmargin obliquely rounded. Hindwings as broad as forewings, oblong-ovate, rounded, cilia $\frac{1}{3}$. Abdomen moderate, in female stout. Middle tibiæ thickened with dense loose hairs; posterior tibiæ clothed with dense long hairs. Forewings with vein 7 to costa, 2 before angle of cell. Hindwings with vein 5 bent and somewhat approximated to 4 at base.

The exact position of this curious and peculiar genus is not yet fully apparent, but it certainly belongs to the immediate neighbourhood of *Hoplitica* and *Heliocausta*, as indicated by the absence of the basal pecten of antennæ, the bent vein 5 of hindwings, and the crimson tints, especially of the legs, so characteristic of this group. But the termination of vein 7 of the forewings in the costa is quite exceptional here (though shared by *Euphiltra*), and the palpi are almost unique in character also, though approximating somewhat to some forms of *Palparia*. The very short ciliations of the antennæ ($\frac{1}{3}$) are found again in *Nymphostola* and *Proteodes*.

Only one species is yet knwn, belonging to Australia.

14. *Ench. glaucopis*, n. sp.

Media, alis ant. griseis, costa venisque læte roseis, fascia angusta ante medium saturatiori, macula dorsi media flava, roseo-suffusa, interdum altera nigra; post. griseis.

♂ ♀. 15$\frac{1}{4}$–22 mm. Head and thorax greyish-ochreous-brown, slightly mixed and sometimes suffused with carmine, face whitish. Palpi whitish-ochreous, strongly mixed with dark fuscous, suffused with carmine, especially on upper edge and towards base. Antennæ grey, towards base suffused with carmine. Abdomen grey, anal tuft of male whitish-ochreous. Anterior legs bright deep carmine, beneath white; middle tibiæ ochreous-white suffused above with carmine, tarsi bright carmine, beneath ochreouswhite; posterior legs ochreous-white, tarsi bright carmine towards apex above. Forewings oblong, moderately broad, costa gently arched, strongly bent towards base, apex rounded, hindmargin obliquely rounded; fuscous-grey, margins narrowly dark fuscous; costal edge, hindmarginal edge, and all veins marked by bright carmine lines; a very ill-defined straight oblique cloudy dark grey transverse line from middle of costa to inner margin at $\frac{2}{5}$; a very ill-defined roundish pale yellow spot on middle of

inner margin, anteriorly or wholly carmine-tinged, margined anteriorly by the transverse dark grey line; a round suffused blackish-grey spot on inner margin at $\frac{4}{5}$, in some specimens very conspicuous, in others absent; an indistinct dark fuscous dot in disc at $\frac{2}{3}$: cilia carmine, towards anal angle light grey. Hindwings in male grey-whitish, in female grey, paler towards base; cilia in male grey-whitish, in female whitish-grey.

Conspicuously characterised by the grey ground colour, bright rosy veins, and suffused yellow dorsal spot; not variable, except in the appearance of the dorsal blackish spot beyond middle.

Eight specimens taken together in September on a fence near Sydney after a high wind, probably dislodged from *Eucalypti*.

3. Eclecta, *n. g.*

Head loosely haired, sidetufts moderate, rough, meeting, rather projecting between antennæ. Antennæ in male thickened, serrate, closely and shortly ciliated ($\frac{1}{2}$), basal joint stout, without pecten. Palpi moderately long, second joint oblique, somewhat exceeding base of antennæ, densely scaled, somewhat roughened beneath, terminal joint shorter than second, erect, stout, roughened with scales beneath. Thorax with an oblique posterior crest. Forewings elongate, rather broad, apex acute, hindmargin obliquely concave. Hindwings as broad as forewings, elongate-ovate, hindmargin very faintly sinuate beneath apex, cilia $\frac{1}{3}$. Abdomen moderate. Posterior tibiæ with short appressed hairs. Forewings with vein 7 to hindmargin, 2 from before angle of cell. Hindwings with vein 5 bent and approximated to 4 at base.

Also a peculiar genus, related to *Eochra*; characterised amongst the genera with vein 7 to hindmargin, 5 of hindwings bent, and antennæ without basal pecten, by the crested thorax, short ciliations of antennæ, and unusually short cilia of hindwings.

The single species is confined to Australia.

15. *Ecl. aurorella*, n. sp.

Media, alis ant. roseis, vitta plicæ fracta, litura disci obliqua, altera anguli analis, signoque postico magno trilingui saturate fuscis, partim cano-marginatis ; post. dilute ochreo-roseis.

♂ ♀. 18½–19½ mm. Head whitish, face slightly carmine-tinged. Palpi ochreous-whitish, irregularly suffused with carmine-pink. Antennæ whitish-ochreous. Thorax very pale carmine-pink, towards centre whitish, anterior margin narrowly and apex of crest dark crimson-fuscous. Abdomen ochreous-whitish, faintly crimson-tinged. Legs whitish-ochreous, anterior and middle tibiæ pale crimson. Forewings moderately broad, costa arched towards base and more strongly before apex, apex broadly produced, acute, hindmargin rather deeply concave ; rather light crimson-pink ; extreme costal edge whitish from near base to ¾ ; a suffused dark fuscous subcostal streak from base to about ⅓, posteriorly indistinct ; a short dark reddish-fuscous dash on inner margin at base, indistinctly margined above with whitish ; a dark reddish-fuscous basally attenuated longitudinal streak from base to a little below middle of disc, thence bent obliquely downwards, not reaching inner margin, the angle filled up beneath with whitish-ochreous, the streak margined above from base to angle with white ; a dark reddish-fuscous oblique streak from disc slightly above middle at ⅖ from base to anal angle, posteriorly attenuated, interrupted above angle of discal streak, with which it is almost confluent, margined posteriorly with white, and its discal extremity connected with base of wing by a slender white line ; an irregularly triangular dark reddish-fuscous blotch, more ochreous-fuscous beneath, on hindmargin, its apex extending to disc at ⅗ from base, its base extending from above anal angle to beneath apex, lower side suffused, upper side connected in disc with a dark reddish-fuscous acute diamond-shaped mark beneath costa, beyond the connection margined with white ; within this triangle is a slender white twice sharply-toothed line proceeding from middle of upper side to lower angle,

and two small indistinct whitish spots on hindmargin; cilia ochreous-whitish, transversely barred with dull carmine-pink and reddish-fuscous. Hindwing ochreous-whitish, crimson-tinged; cilia ochreous-whitish.

At once recognisable by the complex markings on the rosy forewings; a similar complicated pattern only occurs in the grey *Palp. falcifera*. It is a beautiful and striking insect.

I have taken two specimens near Sydney in February, amongst dry bush, and seen a third from the same place; it appears to be retired in habits.

4. Lepidotarsa, *n. g.*

Head loosely haired, sidetufts large, erect, spreading. Antennæ somewhat serrate, in male with very long fine ciliations (4), basal joint stout, with strong pecten. Palpi moderate, second joint not reaching base of antennæ, densely scaled, somewhat loosely beneath, terminal joint slender, much shorter than second. Thorax smooth. Forewings elongate, moderate, apex almost acute, hindmargin very oblique, very slightly concave. Hindwings distinctly narrower than forewings, elongate-ovate, hindmargin faintly sinuate, cilia $\frac{3}{5}$. Abdomen moderate. Anterior tibiæ and tarsi conspicuously thickened with dense scales; middle tibiæ densely scaled; posterior tibiæ clothed with long fine hairs. Forewings with vein 7 to hindmargin, 2 from considerably before angle of cell. Hindwings normal.

Rather nearly allied to *Eochroa*, but distinguished from it and all other neighbouring genera by the strongly dilated anterior tarsi and tibiæ, which in repose are displayed in front; a similar character recurs in *Piloprepes* and *Crepidosceles*, but neither of these genera are at all nearly allied in other respects. The form of the forewings is rather peculiar and elegant, and the long ciliations of the antennæ are noteworthy.

The two species, both Australian, are at once separated by the different groundcolour.

16. *Lep. chrysopoca*, n. sp.

Media, capite albo, alis ant. aurantiacis, puncto disci ciliisque externe griseis; post. griseis.

♂. 20 mm. Head and palpi dull white. Antennæ whitish, obscurely ringed with fuscous. Thorax ochreous-yellow, deeper anteriorly. Abdomen grey, anal tuft whitish-grey. Legs whitish-grey, anterior and middle tibiæ and tarsi dark fuscous above, except at apex of tarsal joints. Forewings unicolorous bright deep orange-yellow; extreme costal edge whitish towards middle; a dark fuscous-grey dot in disc a little beyond middle: cilia with basal half deep orange-yellow, terminal half glossy dark grey. Hindwings grey, cilia whitish-grey.

A handsome species, remarkable for the white head contrasting with the deep yellow forewings.

I took a specimen above the Bulli Pass in October, at about 2,000 feet elevation, and have seen two others from Parramatta.

17. *Lep. alphitella*, n. sp.

Minor, capite albo, alis ant. grisco-ochreis, costa anguste cana, punctis tribus disci obsoletis ciliisque externe griseis; post. albidis.

♀. 16½ mm. Head, palpi, and antennæ dull white. Thorax white, tinged with ochreous, and finely irrorated with grey. Abdomen whitish-grey. Legs whitish, slightly mixed with fuscous-grey. Forewings pale greyish-ochreous, finely irrorated with fuscous, becoming whitish on inner margin near base; costal edge white; a small dark fuscous-grey spot in disc before middle, and another double one in disc beyond middle; a third, partially obsolete, on fold slightly beyond first; cilia with basal half pale greyish-ochreous, terminal half dark fuscous. Hindwings grey-whitish, cilia whitish.

A distinct but inconspicuous insect, nearly allied to the preceding, but superficially somewhat recalling *Eochr. aclea*.

One specimen taken at Parramatta in September, and a second by Mr. G. H. Raynor at Waratah on the Hunter River in October.

5. Eochroa, *n. g.*

Head with appressed scales, sidetufts moderate, spreading, meeting behind. Antennæ in male moderate, with rather long fine ciliations (2–3), basal joint rather stout, with basal pecten. Palpi moderate, second joint reaching or somewhat exceeding base of antennæ, with dense appressed scales, somewhat loose beneath, terminal joint shorter than second, moderate, somewhat roughened with scales anteriorly, recurved. Thorax smooth. Forewings elongate, moderate, apex tolerably acute, hindmargin faintly sinuate below apex, cilia $\frac{1}{2}$. Abdomen rather broad, margined. Posterior tibiæ clothed with long fine hairs. Forewings with vein 7 to hindmargin, 2 from somewhat before angle of cell. Hindwings normal.

Apparently transitional in character between *Palparia* and *Philobota*, differing from the former especially by the entire absence of any tuft or projection on the second joint of the palpi, and from the latter by the rather thick and somewhat roughened terminal joint, and the longer ciliations of the antennæ, which are nevertheless shorter than in *Palparia* and *Lepidotarsa.* The affinity of this group with that of *Hoplitica* and its allies seems to be rather collateral than direct, but it is impossible to show this in a linear arrangement. It seems hardly probable that any derivative genera from that group would have regained the lost basal pecten of the antennæ.

The species are elegant and sometimes handsome, frequently crimson-tinged. They are sluggish in habit, like *Palparia*, but generally common where they occur. Some at least of the larvæ must undoubtedly feed on species of *Leptospermum* (*Myrtaceæ*), but I have searched specially for them in vain.

Nine species are known to me; the genus is exclusively Australian, and no doubt many others will be found. They may be distinguished thus:

A. Forewings white ... ...19. *callianassa.*

B. Forewings ochreous or rosy, sometimes grey.
1. Hindwings white, apex more or less rosy.
a. Forewings grey ... ...25. *aclea.*
b. Forewings ochreous.
i. Forewings with well-defined rosy costal border... ... ...20. *inclusella.*
ii. Forewings without well-defined rosy costal border ... ...21. *dejunctella.*
2. Hindwings yellow, apex more or less grey.
a. Costal edge of forewings white ... ...22. *matutinella.*
b. Costal edge of forewings rosy ... ...18. *lætiferana.*
3. Hindwings grey, base sometimes paler.
a. Dorsal edge of forewings mostly dark grey.
i. Head grey-whitish, palpi rosy-tinged...23. *pulverulenta.*
ii. Head and palpi whitish-ochreous ...24. *acutella.*
b. Dorsal edge of forewings pale rosy ...26. *protophaës.*

18. *Eochr. lætiferana*, Walk.

(*Lophoderus lætiferanus*, Walk., Brit. Mus. Cat., 336; *Oecophora semifusella*, ibid. 696; *Cryptolechia pudorinella*, ibid. 760.)

Media, alis ant. ochreo-roseis, interdum purpureo-suffusis, macula magna dorsi postica flava, partim roseo-suffusa, punctis disci tribus roseis; post. flavis.

♂. 16½–21 mm. Head reddish-ochreous or reddish-ochreous-brown. Palpi reddish-ochreous, anteriorly suffused with dark fuscous. Antennæ whitish-ochreous. Thorax reddish-ochreous-brown. Abdomen whitish-yellow. Anterior and middle tibiæ and tarsi fuscous-crimson, posterior tibiæ and tarsi whitish-yellow. Forewings moderate, costa somewhat strongly arched, apex acute,

hindmargin rather oblique, very slightly sinuate; rosy-ochreous or yellowish-carmine-pink, with a suffused yellow blotch above anal angle, indistinctly produced broadly along inner margin to before middle, very ill-defined; between this blotch and base the whole groundcolour is sometimes suffused with purple-fuscous, extending along costa to apex, and obscurely mixed with whitish towards disc; an ill-defined reddish-fuscous dot in disc before middle, a second in disc beyond middle, and a third perpendicularly below first on fold; between first and second is a longitudinal cloudy whitish streak, a faint transverse whitish line following posterior margin of yellow blotch: cilia whitish-yellow, beneath anal angle carmine-tinged, costal cilia pale carmine. Hindwings with hindmargin distinctly sinuate; whitish-yellow, cilia whitish-yellow.

This and the two following species differ from the rest in the less oblique hindmargin of the forewings; this species is distinctly characterised by the yellow hindwings, and rosy forewings with yellow anal blotch and variable purplish suffusion anteriorly.

Taken occasionally at Melbourne and Sydney, in March; Walker's specimens are said to be from Brisbane.

19. *Æochr. callianassa*, n. sp.

Major, alis ant. niveis, costa anguste ferruginea, dorso, vena subcostali trirami, puncto disci, vittaque marginis postici in ciliis flavis; post. niveis, apicem versus griseis.

♂. 26 mm. Head snow-white. Palpi white, externally and in front somewhat suffused with brownish-rosy. Antennæ grey, basal joint white with a fine ferruginous line above. Thorax white, with a pale yellow spot on middle of anterior margin, and shoulder-flaps pale yellow, with a bright ferruginous spot on each shoulder. Abdomen white. Anterior legs ferruginous; middle legs whitish, suffused with pale ferruginous; posterior legs white. Forewings moderate, costa moderately arched, apex obtuse, hind-

margin obligue, almost straight, rounded beneath ; snow-white ; a very slender ferruginous streak along costa, stronger towards base, hardly reaching apex, slenderly margined beneath with pale yellow, extreme costal edge somewhat whitish ; a slender yellow streak along inner margin from near base to anal angle ; a slender yellow streak along inner margin from near base to anal angle ; a slender yellow streak almost from base along subcostal vein, becoming paler beyond middle, and separating into three or four distinct branches to costa along veins 8—11 ; a small ill-defined pale yellow spot in disc beyond middle, and faint indications of pale yellow lines on the other veins : cilia snow-white, basal half pale yellow. Hindwings snow-white, apical third suffused with light grey ; cilia white, somewhat mixed with grey round apex.

A remarkable and beautiful species, exceptionally characterised by the snow-white ground colour with yellow and ferruginous lines.

One fine specimen received from Mr. E. Guest, taken on the Mount Lofty Range, South Australia, where it appears to be not uncommon, frequenting *Banksia*.

20. *Eochr. inclusella*, Walk.

(*Cryptolechia inclusella*, Walk., Brit. Mus. Cat., 767.)

Major, alis ant. dilute ochreis, marginibus roseis ; post. flavo-albidis, apice roseo.

♂. 28 mm. (?). Head and thorax pale ochreous, palpi rosy-tinged. Abdomen yellowish-whitish, anal tuft yellower. Forewings moderate, apex nearly rectangular, hindmargin hardly oblique ; pale yellowish-ochreous ; all margins narrowly rosy, costal brighter. Hindwings yellowish-white, apex rosy-tinged.

A very distinct species, of which unfortunately I have no specimen for description. I saw the type in the British Museum, and have no doubt that it belongs to this genus, with which all characters agree that I was able to observe ; but omitted to make

a thorough diagnosis, though I think the above, drawn mainly from Walker's description, will be sufficient.

Said to be from Sydney.

21, *Eochr. dejunctella*, Walk.

(*Cryptolechia dejunctella*, Walk., Brit. Mus. Cat., 1036.)

Media, alis ant. ochreis, partim rosea-suffusis, margine postico dorsoque saturate roseis, interdum punctis duobus disci obsoletis roseis, ciliis griseis; post. albidis, apice leviter roseo.

♂ ♀. Head and thorax light ochreous. Palpi light ochreous, second joint suffused with ochreous-reddish externally and beneath Antennæ whitish. Abdomen whitish, anal tuft tinged with ochreous. Anterior and middle tibæ and tarsi dark fuscous-carmine; posterior tibiæ and tarsi whitish. Forewings moderate, costa moderately arched, apex almost acute, hindmargin rather sinuate, oblique; light ochreous; a light reddish-fuscous cloudy suffusion along subcostal vein from base to about $\frac{2}{3}$, very indistinct posteriorly; a darker reddish-fuscous cloudy suffused streak along inner margin from $\frac{1}{4}$ to anal angle; a reddish-fuscous dot in disc before middle, often obsolete; a second more distinct reddish-fuscous dot in disc beyond middle; between the second dot and anal angle is a small indistinct light reddish-fuscous cloudy spot, often connected with base by a very obsolete light reddish-fuscous longitudinal suffusion; a slender rather dark reddish-fuscous cloudy streak along hindmargin from apex to anal angle; in female all these markings are generally rendered obsolete by a light ochreous-reddish suffusion of the ground colour; cilia grey, mixed with dark grey, with a dark grey line near base on upper half of hindmargin, costal cilia ochreous-reddish. Hindwings with hindmargin very slightly sinuate; whitish, apex faintly rosy-tinged; cilia whitish.

Distinguished by its rosy-ochreous forewings and whitish hindwings; the rosy tinge is more pronounced and uniform in the female, which is rather smaller in size.

Tolerably common round Sydney and Melbourne, and occurs also at Blackheath on the Blue Mountains, in December, February, and March; also taken by Mr. E. Guest on Mount Lofty range, South Australia.

22. *Eochr. matutinella*, Walk.

(*Oecophora matutinella*, Walk., Brit. Mus. Cat., 689; *Cryptolechia marginella*, ibid. 761.)

Media, alis, ant. lamella squamea dorsi adversus basim instructis griseis, postice flavo-suffusis, interdum omnino roseo-suffusis, costa peranguste cana, punctis disci tribus saturatioribus, ciliis saturate roseo-griseis; post. dilute flavis, apice ciliisque griseis.

♂ ♀. 19–23 mm. Head ochreous-grey on crown, face whitish. Palpi whitish, anteriorly and on outer side of second joint dark grey. Antennæ whitish. Thorax ochreous-grey, lighter posteriorly. Abdomen whitish-ochreous, anal tuft mixed with brownish-ochreous. Anterior tibiæ and tarsi dull carmine-pink; middle tibiæ grey, tarsi whitish suffused with grey; posterior tibiæ and tarsi ochreous-whitish. Forewings moderate, costa moderately arched, apex tolerably acute, hindmargin obliquely rounded, not sinuate; ochreous-grey, suffused with whitish-ochreous along disc and towards base of inner margin, with a large irregularly oval suffused deep ochreous-yellow patch on hindmargin, very ill-defined, extending from somewhat before anal angle almost to apex; this patch is sometimes also more or less suffused with ochreous-grey and obsolete; disc sometimes broadly suffused with carmine-pink from base to $\frac{2}{3}$, the suffusion extending less distinctly to costa and inner margin; towards base of inner margin is a triangular obliquely projecting plate of ochreous-whitish scales, proceeding from near margin and projecting beyond it; costal edge very narrowly white from base to apex; extreme dorsal margin white from $\frac{1}{3}$ to anal angle; a dark grey cloudy dot in disc before middle, a second in disc beyond middle, a third on fold perpendicularly below first, and sometimes a fourth

perpendicularly below second, all very ill-defined and sometimes obsolete; a rosy suffusion along hindmargin from near anal angle to apex: cilia dark grey, on apical half of hindmargin carmine-tinged. Hindwings with hindmargin distinctly sinuate; dull light ochreous-yellow, apex suffused with fuscous-grey; cilia fuscous-grey, towards anal angle becoming whitish-yellow.

A distinct species, specially characterised by the curious flap of scales towards inner-margin, apparently an abnormal development of the usual slight protuberance; it is very noticeable when the wings are closed.

Common at Sydney and Parramatta in October and November, evidently attached to *Leptospermum;* it is very sluggish, and when beaten out, usually fall to the ground.

23. *Eochr. pulverulenta*, n. sp.

Media, alis ant. ochreo-griseis, antice leviter roseo-suffusis, vitta dorsi fusca, punctis disci tribus obscuris saturatioribus, ciliorum basi saturate grisea, apice albo; post. griseis; capite albido.

♂ ♀. 19–21 mm. Head greyish-whitish, mixed on sides of crown with grey, face white. Palpi white, suffused with pale carmine-pink and externally irrorated with grey. Antennæ whitish, towards apex grey. Thorax pale ochreous, shoulders darker. Abdomen grey-whitish. Anterior tibiæ and tarsi dark grey; middle tibiæ and tarsi whitish sprinkled with grey; posterior tibiæ and tarsi white. Forewings moderate, costa moderately arched, apex acute, hindmargin distinctly sinuate, very oblique; light reddish-fuscous, densely irrorated with light ochreous-grey, ground colour clearest towards base of costa; extreme costal edge sometimes whitish from $\frac{1}{4}$ to apex, often obscured through the grey suffusion; extreme edge of inner margin very slenderly white throughout; a dark grey suffused streak, attenuated at both extremities, along inner margin from

¼ almost to anal angle; between this streak and base the inner margin is suffused with whitish-ochreous; a broad obsolete whitish-ochreous suffusion of the ground colour towards hindmargin except near costa, obscured by the grey irroration, most distinct beyond apex of dorsal streak; an indistinct dark grey dot in disc before middle, a second in disc beyond middle, and a third on fold rather beyond first: cilia with basal half dark grey, apical half clear white, the separation sharply marked, with a grey spot at apex of wing. Hindwings with hindmargin slightly sinuate; grey, becoming ochreous-whitish towards base, apex dark grey; cilia grey, tips clear white.

This and the following species are very closely allied; this species may be best distinguished by the rather larger size, the grey-whitish head and rosy-tinged palpi, and the reddish tinge anteriorly towards costa, which is always distinct; the contrast between the whitish head and ochreous thorax is very marked, whereas in *E. acutella* they are concolorous, both whitish-ochreous.

Six specimens taken at Blackheath in the Blue Mountains (3,500 feet) in January, and near Sydney in November, beaten from *Leptospermum*.

24. *Eochr. acutella*, Walk.

(*Cryptolechia acutella*, Walk., Brit. Mus. Cat., 766.)

Media, alis ant. pallide ochreis, partim griseo-suffusis, margine dorsali punctisque disci tribus saturate fuscis, ciliis albis, linea prope basim nigricanti; post. griseis, basim versus ochreo-albidis; capite albido-ochreo.

♂ ♀. 17–20 mm. Head, palpi, antennæ, thorax, and abdomen whitish-ochreous. Anterior tibiæ and tarsi dark grey mixed with whitish-ochreous; middle tibiæ and tarsi clear white, partly irrorated with grey; posterior tibiæ and tarsi white, slightly ochreous-tinged. Forewings moderate, costa moderately arched, apex acute, hindmargin sinuate, very oblique; very light reddish-

fuscous, suffusedly irrorated with light grey; extreme costal edge suffusedly whitish-ochreous from about $\frac{1}{3}$ to apex; inner margin broadly whitish ochreous towards base; a more or less distinct suffused dark grey streak along inner margin from $\frac{1}{4}$ to anal angle, attenuated at extremities, suffusedly margined above with whitish-ochreous; an indistinct whitish-ochreous streak beneath costa from base to $\frac{2}{3}$; an indistinct whitish-ochreous streak from middle of disc almost to hindmargin below apex, posteriorly somewhat broader and more suffused; a dark grey dot in disc before middle, a second in disc beyond middle, and a third obliquely beyond first on fold; between the second and anal angle is occasionally a small blackish or dark grey spot, but usually this is not indicated; a faint grey line near and parallel to lower half of hindmargin, often obsolete; sometimes the second dot is connected with anal angle by an oblique suffused dark grey line: cilia with basal half light brownish-ochreous, limited posteriorly by a suffused dark grey line, apical half white. Hindwings with hindmargin distinctly sinuate; grey, suffused with ochreous-whitish towards base, apex and a hindmarginal line suffusedly dark grey; cilia whitish, with an indistinct grey line.

A less elegant insect than the preceding, of which the distinctive points are given above. The dark markings towards anal angle are a curious form of variation.

Commonly beaten from *Leptospermum* near Sydney, in October and November; I also took a specimen in the Shoalhaven district in January.

25, *Eochr. aclea*, n. sp.

Minor, alis ant. ochreo-griseis, punctis disci duobus obscure saturatioribus; post. albis, apice levissime roseo.

♀. 14 mm. Head grey mixed with whitish. Palpi grey, extremity of second joint whitish. Antennæ grey, basal joint white. Thorax grey, suffused with whitish on shoulders. Abdomen whitish. Anterior tibiæ and tarsi grey; middle tibiæ and tarsi

grey mixed with whitish; posterior tibiæ and tarsi white. Forewings rather narrow, costa moderately arched, apex acute, hindmargin slightly sinuate, rather strongly oblique; light grey, irregularly irrorated with dark grey, especially towards margins; base of costa suffused with white, and extreme edge very slenderly white throughout; a blackish-grey dot in disc before middle, and another in disc beyond middle; there are other scattered dark scales, but not forming defined markings: cilia whitish, mixed with grey on basal half, with a blackish-grey spot at apex. Hindwings with hindmargin hardly sinuate; white, apex very faintly rosy; cilia white, round apex greyish-tinged.

Easily known by its small size, simple grey forewings and white hindwings.

One specimen taken by Mr. G. H. Raynor near Launceston, Tasmania, in December.

26. *Eochr. protophaës*, n. sp.

Media, alis ant. dilute albido-roseis, punctis disci duobus atris, ciliis griseo-suffusis; post. griseis.

♂ ♀. 20–23 mm. Head, palpi, and thorax ochreous-whitish, very faintly rosy-tinged. Antennæ grey, towards base ochreous-white. Abdomen whitish-grey, anal tuft ochreous-tinged. Anterior and middle legs dark grey, middle tarsi with apex of joints whitish; posterior legs ochreous-whitish, first joint of tarsi partially greyish-suffused. Forewings moderate, costa moderately arched, apex obtuse, hindmargin oblique, slightly rounded; whitish-ochreous, tinged with brownish-rosy; extreme costal edge black near base, ochreous-white elsewhere; a well-defined conspicuous round black dot in disc before middle, and a second similar dot in disc beyond middle; some scattered grey scales towards hindmargin: cilia whitish-ochreous, rosy-tinged, on hindmargin more rosy and strongly suffused with dark grey. Hindwings and cilia grey.

A very distinct species, in form of wing most approaching *E. aclea*, but easily known from the other species with grey hindwings, by its uniform pale pinkish forewings, and very distinct discal dots.

I took one specimen near Sydney in September, and have received a second from Mr. E. Guest, who states that it is locally not uncommon on the Mount Lofty Range, South Australia, in December, frequenting *Eucalyptus* scrub.

6. Euphiltra, *n. g.*

Head with appressed scales, sidetufts moderate, spreading. Antennæ in male—(?), basal joint rather short, without pecten. Palpi moderate, second joint not reaching base of antennæ, with rough projecting scale beneath, especially in middle, terminal joint as long as second, recurved. Thorax smooth. Forewings elongate, moderate, apex rounded, hindmargin obliquely rounded. Hindwings considerably narrower than forewings, elongate-ovate, hindmargin rounded, cilia $\frac{3}{4}$. Abdomen somewhat dilated, strongly margined. Posterior tibiæ clothed with long hairs. Forewings with vein 7 to costa, 2 from somewhat before angle of cell. Hindwings normal.

The termination of vein 7 of the forewings in the costa renders this genus exceptional in this position ; but the accordance with *Zonopetala* is so marked in all other particulars, especially the somewhat peculiar palpi, that I consider its location here undoubted. I think the difference of venation to have arisen in this instance incidentally from the narrowing of the wings, and regard the genus as a development (with retrograde characters) from *Zonopetala*.

27. *Euph. eroticella*, n. sp.

Minor, nivea, thorace antice nigro, alis ant. fascia lata ante medium, altera angusta post medium, macula postica ciliisque ferrugineis, maculis apicis angulique analis in ciliis nigris ; post. griseis.

♀. 15 mm. Head white, sides of crown with a dark fuscous spot. Palpi white, extreme base of second joint dark fuscous. Antennæ dark fuscous. Thorax black, a posterior spot and a small spot on each side white. Abdomen reddish-brown, lateral margins pale ochreous, posterior margins of segments silvery-grey. Anterior and middle tibiæ dark fuscous-grey, tarsi grey-whitish; posterior tibiæ and tarsi whitish-yellow. Forewings somewhat narrow, costa moderately arched, apex rounded, hindmargin very obliquely rounded; clear white; a small very narrow linear black spot at base of wing, extending from costa to inner margin; a deep reddish-ochreous moderately broad transverse fascia, extending from $\frac{2}{5}$ of costa to middle of inner margin, considerably dilated beneath, anterior edge concave, suffusedly margined with dark fuscous, posterior edge sinuate, well-defined, not margined; a narrow deep reddish-ochreous fascia from $\frac{2}{3}$ of costa to anal angle, on costa and inner margin suffused with dark fuscous, anterior edge nearly straight, suffused, posterior edge well-defined, indented above middle; an ill-defined triangular bright reddish-ochreous patch on upper $\frac{2}{3}$ of hindmargin, very narrowly separated from the second fascia, confluent above with a suffused blackish apical spot: cilia reddish-ochreous on hindmargin and costa, blackish-fuscous at apex and anal angle. Hindwings dark grey, somewhat lighter at base; cilia whitish-ochreous, mixed with grey round apex.

A very handsome species, in markings approaching *Zon. decisana* but (apart from structural differences) much narrower-winged, with the first fascia reddish-ochreous instead of blackish-fuscous and the hindwings wholly grey.

Two specimens taken at Parramatta in October.

7. Zonopetala, *n. g.*

Head with appressed scales, side tufts large, raised, meeting, dilated behind. Antennæ in male slightly serrate, rather strongly and unevenly ciliated ($1\frac{1}{2}$), basal joint moderate, without pecten.

Palpi moderate, second joint hardly reaching base of antennæ, much dilated with dense scales, beneath with loose somewhat projecting scales beyond middle; terminal joint almost as long as second, rather stout, somewhat roughened anteriorly, strongly recurved. Thorax smooth. Forewings elongate, rather broad, apex somewhat rectangular, acute, hindmargin slightly oblique, almost straight or slightly concave beneath apex. Hindwings slightly narrower than forewings, oblong-ovate, hindmargin faintly sinuate, cilia $\frac{2}{3}$ to $\frac{1}{2}$. Abdomen stout, strongly margined. Posterior tibiæ clothed with long fine hairs. Forewings with vein 7 to hindmargin, 2 from somewhat before angle of cell. Hindwings normal.

A small well-marked genus, nearly allied to *Heliocausta*, of which is is probably a development, and also with marked affinity (perhaps collateral) with *Eochroa;* it is well distinguished amongst the group with unpectinated basal joint of antennæ and vein 7 terminating in the hindmargin, by the structure of the palpi. The species are handsome and strikingly marked insects; the six known to me may be thus distinguished:

A. Thorax wholly black anteriorly.
  1. Posterior fascia straight, dark fuscous...29. *clerota.*
  2. Posterior fascia irregular, ochreous-brown 31. *decisana.*
  3. Posterior fascia suffused, grey... ...30. *glauconephela.*

B. Shoulders only black.
  1. Forewings pinkish-grey, without fasciæ.
    a. Forewings with a blackish costal spot before middle ... ...33. *quadripustulella.*
    b. Forewings without blackish costal spot before middle ... ...32. *melanoma.*
  2. Forewings white, fasciated ... ...28. *divisella.*

28. *Zon. divisella*, Walk.

(*Oecophora divisella*, Walk., Brit. Mus. Cat. 677, (non 685).

Media, nivea, humeris nigris, alis ant. apicem versus ochreo-suffusis, costæ basi, fascia antica latiore, altera postica angustiore, ciliisque nigris; post. dilute flavis.

♂ ♀. 18–19 mm. Head white, sides of crown with a dark fuscous spot. Palpi white, basal third of second joint dark fuscous. Antennæ blackish-fuscous. Thorax white, shoulders with a dark fuscous spot. Abdomen whitish-yellow. Anterior tibiæ and tarsi dark fuscous, tarsal joints with whitish-yellow apical rings; middle tibiæ dark fuscous externally yellowish above, tarsi dark fuscous with whitish-yellow rings at apex of joints; posterior tibiæ and tarsi whitish-yellow. Forewings moderately broad, costa moderately arched, apex obtuse-angled, hindmargin straight, slightly oblique; clear white, apical third faintly ochreous-tinged; a small blackish-fuscous spot at base of costa; two straight moderately broad blackish-fuscous transverse fasciæ, rather irregularly edged; first from $\frac{1}{3}$ of costa to $\frac{2}{5}$ of inner margin, somewhat dilated on inner margin so that anterior edge appears concave; second from $\frac{2}{3}$ of costa to anal angle, slightly narrower than first, somewhat dilated below middle: a blackish hind-marginal line: cilia blackish-grey, becoming lighter grey towards anal angle, darkest at apex, costal cilia ochreous-yellow. Hindwings with hindmargin slightly indented; whitish-yellow; cilia whitish-yellow, becoming grey round apex.

A handsome species, differing from *Z. clerota* by the thorax wholly white except on shoulders, the ochreous tinge of the apical third, and the grey cilia of the anal angle.

Two fine specimens at rest on *Eucalyptus* trunks near Sydney, January and February; I have seen several others.

29. *Zon. clerota*, n. sp.

Media, nivea, thorace antice nigro, alis ant. costæ basi, fascia antica angustiore, altera postiea latiore, ciliis nigris, ciliis anguli analis ochreis; post. dilute ochreis, interdum postice griseo-suffusis.

♂ ♀. 16–20 mm. Head white, sides of crown with a dark fuscous spot. Palpi white, basal third of second joint dark fuscous. Antennæ dark fuscous. Thorax white, anterior half dark fuscous. Abdomen whitish-yellow. Anterior tibiæ and tarsi dark fuscous, tarsal joints with whitish-yellow apical rings; middle tibiæ yellowish-grey, with yellow hairs above and below, tarsi grey with whitish-yellow rings at apex of joints; posterior tibiæ and tarsi whitish-yellow. Forewings moderately broad, costa moderately arched, apex acute, hindmargin markedly concave, rather oblique; clear white; a small blackish-fuscous spot at base of costa; two straight moderately broad, rather irregularly-edged, blackish-fuscous transverse fasciæ; first from $\frac{1}{3}$ of costa to slightly before middle of hindmargin, margins almost straight, not dilated; second from about $\frac{2}{3}$ of costa to somewhat before anal angle, somewhat broader than first, not dilated; a slender blackish-fuscous streak along hindmargin from apex to a little above anal angle, sometimes considerably dilated towards lower extremity: cilia on apical $\frac{2}{3}$ of hindmargin blackish-grey, becoming lighter and suffused with yellowish at tips, at anal angle whitish-yellow, beneath it yellowish-grey, costal cilia ochreous-yellow, Hindwings with hindmargin distinctly sinuate; whitish-yellow, in female suffused with grey posteriorly; cilia whitish-yellow, becoming grey round apex.

Readily separated from the preceding species by the black anterior half of thorax, the absence of any ochreous tinge towards apex, the somewhat different form and position of the fasciæ, and the yellow cilia towards anal angle.

Taken not uncommonly near Sydney in October and November, and at Brisbane in September.

30. *Zon. glauconephela*, n. sp.

Parva, nivea, thorace nigro, alis ant. postice griseo-suffusis, basi fasciaque lata ante medium nigris, linea postica transversa

saturate grisea, ciliis griseis, sub apicem nigricantibus; post. griseis, basim versus albido-ochreis.

♂ ♀. 12–12½ mm. Head white, sides of crown with a dark fuscous spot. Palpi white, basal third of second joint dark fuscous. Antennæ dark fuscous. Thorax blackish-fuscous, with a white spot behind. Abdomen whitish-yellow. Anterior tibiæ and tarsi blackish-fuscous; middle tibiæ and tarsi dark fuscous above, yellow beneath; posterior tibiæ whitish-yellow, tarsi yellowish partially suffused with grey. Forewings moderately broad, costa moderately arched, apex acute, hindmargin distinctly sinuate, rather oblique; white, apical ⅖ suffused with light grey, most strongly towards hindmargin; a small blackish-fuscous basal spot, extending from costa to inner margin, its outer edge straight; a nearly straight moderately broad blackish central fascia, extending from costa a little before middle to inner margin slightly beyond middle, smewhat dilated beneath, its anterior edge slightly concave; a very small ill-defined blackish spot on costa at ¾, whence proceeds an irregular suffused dark grey line to anal angle, bent inwards in middle, and obscurely whitish-margined posteriorly; suffused blackish line along hindmargin from apex to a little above anal angle: cilia whitish-grey mixed with yellowish, basal ⅔ on upper half of hindmargin dark grey, and with a dark grey spot at apex, costal cilia ochreous-yellow. Hindwings with hindmargin markedly sinuate; grey, suffused with whitish-yellow towards anal angle.

Characterised by its small size, the grey posterior suffusion, and the reduction of the second fascia to a suffused dark grey line.

Three specimens taken near Sydney in January and February.

31. *Zon. decisana*, Walk.

(*Conchylis decisana*, Walk., Brit. Mus. Cat. 367; *Oecophora retractella*, ibid. 680; *Oecophora mediella*, ibid. 1033.)

Minor, nivea, thorace antice nigro, alis ant. basi fasciaque lata ante medium nigris, fascia postica maculaque marginis postici brunneis, supra nigricantibus, ciliis griseis; post. dilute ochreis, apicem versus griseis.

♂ ♀. $14\frac{1}{2}$–17 mm. Head white, sides of crown with a dark fuscous spot. Palpi white, basal third of second joint dark fuscous. Antennæ dark fuscous. Thorax blackish-fuscous, a posterior spot and a small spot on each side white. Abdomen whitish-yellow. Anterior tibiæ dark fuscous, middle tibiæ dark fuscous with hairs above yellow, anterior and middle tarsi dark fuscous with yellowish rings at apex of joints; posterior tibiæ and tarsi whitish-yellow. Forewings moderate, costa gently arched, apex acute, hindmargin sinuate, oblique; clear white; a small blackish-fuscous spot on base of costa, just reaching inner margin, outer edge straight; a moderately broad, slightly outwardly curved, blackish-fuscous transverse fascia, extending from costa slightly before middle to inner margin slightly beyond middle, somewhat broader beneath; a short black transverse linear mark in disc at $\frac{3}{5}$, usually connected with central fascia below middle so as to appear an upwardly oblique tooth; a somewhat triangular blackish-fuscous spot on costa about $\frac{3}{4}$, whence proceeds a rather ill-defined, moderately broad, somewhat inwards-curved reddish-brown transverse fascia to anal angle; an ill-defined triangular reddish-brown spot on upper half of hindmargin narrowly separated from the second fascia, connected at upper angle with an oblique blackish-fuscous apical dash: cilia dark grey, mixed with whitish towards base, with a blackish-grey spot at apex, costal cilia white. Hindwings with hindmargin slightly sinuate: whitish-yellow, apex suffused with grey; cilia whitish-yellow, becoming grey round apex.

Very distinct by the reddish-brown posterior markings.

Common round Sydney from October to January, yet I have not found it elsewhere.

32. *Zon. melanoma*, n. sp.

Media, humeris nigis, alis ant. dilute roseo-griseis, basi costæ, punctis disci plerisque, serie punctorum postica angulata alteraque marginis postici nigris; post. griseis, basim versus albidis.

♀. 21 mm. Head white. Palpi pinkish-whitish, basal half of second joint blackish. Antennæ dark grey. Thorax pinkish-whitish, lateral margin of shoulders sharply blackish-fuscous. Abdomen whitish-grey. Anterior and middle legs dark grey, tarsal joints with whitish apical rings; posterior legs whitish. Forewings moderate, posteriorly dilated, costa gently arched, apex obtuse, hindmargin faintly sinuate, slightly oblique; light pinkish-grey, somewhat suffused with pinkish-white at base and towards basal third of costa; a small sharply-defined blackish-fuscous spot at base of costa; a blackish dot on costa at $\frac{2}{5}$, another obliquely before it in disc, and a third midway between them; two very small blackish dots transversely placed in disc beyond middle; a transverse row of tolerably well-defined blackish dots from costa somewhat beyond middle obliquely and irregularly outwards to middle of disc at $\frac{4}{5}$ from base, thence bent and continued to inner margin before anal angle, lower part rather curved; a row of blackish dots along hindmargin and apical fourth of costa: cilia light pinkish-grey, tips paler. Hindwings with hindmargin distinctly sinuate; grey, becoming whitish near base; cilia whitish, near base greyish-tinged.

Entirely different in markings from the preceding species, and reverting to the normal type, as of *Heliocausta;* yet undoubtedly referable to this genus by structure. It is interesting that the sharply-defined black basal band of the second joint of the palpi, and the black spot at base of costa, should be found to persist in this case.

I have described two specimens in the collection of Mr. G. Masters, taken near Sydney.

33. *Zon. quadripustulella*, Walk.

(*Cryptolechia quadripustulella*, Walk., Brit. Mus. Cat., 761.)

Media, humeris nigris, alis ant. roseo-cinereis, basi costæ maculaque costali ante medium nigris; post. griseis.

21 mm. Head white. Thorax pinkish-grey, with a blackish spot on shoulders. Forewings pinkish-grey, base of costa and a larger spot on costa before middle blackish. Hindwings grey.

The above diagnosis is abstracted from Walker's, and is sufficient for identification; I have been unable to obtain a specimen for examination or description, and cannot therefore vouch for its correct location, but it is so obviously nearly allied to *Z. melanoma*, that the uncertainty is small.

Mr. G. H. Raynor took a specimen near Parramatta in March.

8. Heliocausta, *n. g.*

Head with appressed scales, sidetufts moderate, loosely appressed. Antennæ moderate, in male strongly ciliated ($1\frac{1}{2}$ to 2), basal joint moderate, without pecten, sometimes with two or three fugitive scales. Palpi moderate, second joint hardly reaching or somewhat exceeding base of antennæ, with smooth appressed scales, terminal joint shorter than second, moderate, recurved. Thorax smooth. Forewings elongate, moderate, apex rectangular, hindmargin nearly straight above, rounded beneath. Hindwings slightly narrower than forewings, oblong-ovate, hindmargin slightly rounded, cilia $\frac{1}{3}$. Abdomen moderate or rather stout. Posterior tibiæ with rather short hairs above, loosely scaled beneath. Forewings with vein 7 to hindmargin, 2 from before angle of cell. Hindwings normal.

Differs essentially from *Philobota* only by the absence of the basal pecten of antennæ, which is never represented by more than one or two fugitive hair scales, whilst in *Philobota* it is always perfect. The genus is natural and interesting; it must be

regarded as a direct development from *Philobota*, and it further furnishes the origin of *Hoplitica*, so that it forms a valuable transitional link, without which the development of the group would be obscure.

The larvæ known are of the normal type of the family, sixteen-legged, rather stout, with complex mottled markings, feeding gregariously amongst bunches of spun-together leaves of *Eucalyptus*.

I have fifteen species, of which the following is a tabulation:

I. Extreme costal edge of forewings distinctly rosy, at least towards base.
  A. Hindwings more or less wholly yellow.
    1. Hindwings with well-defined dark border.
      a. Femora crimson-suffused beneath ...42. *phylarcha.*
      b. Femora white ... ... 43. *triphænatella.*
    2. Hindwings without defined border.
      a. Forewings with dark fuscous central fascia. ... ...47. *euselma.*
      b. Forewings not fasciated.
        i. Forewings broad; apical cilia of hindwings yellow... ... ...46. *parthenopa.*
        ii. Forewings moderate; apical cilia of hindwings grey ... ...45. *protoxantha.*
  B. Hindwings not yellow.
    1. Forewings broad, costa much arched ...48. *rufogrisea.*
    2. Forewings moderate, oblong
      a. Forewings whitish-ochreous ... ... 39. *pelosticta.*
      b. Forewings grey-whitish ... ...35. *inceptella.*
      c. Forewings grey ... ...34. *incarnatella.*
II. Costa of forewings not rosy.
  A. Forewings white ... ...38. *hemiscia.*
  B. Forewings yellow.
    1. Hindwings yellow ... ...44. *paralyrgis.*
    2. Hindwings grey ... ...41. *hemiteles.*

C. Forewings fuscous or grey.
  1. Costa of forewings ochreous-yellow ...40. *elæodes*.
  2. Costa of forewings fuscous-grey.
    a. Hindwings yellow ... ...37. *limbata*.
    b. Hindwings grey ... ...36. *severa*.

34. *Hel. incarnatella*, Walk.

(*Cryptolechia incarnatella*, Walk., Brit. Mus. Cat. 754.)

Media, alis ant. griseis, purpureo-sparsis, margine costali roseo, fascia antica angusta obliqua punctoque disci purpureis; post. dilute griseis.

♂. 23 mm. Head grey, on crown slightly fuscous-tinged. Palpi grey-whitish, second joint irrorated with grey, especially towards apex, and with an irregular longitudinal deep carmine streak on outer side, terminal joint anteriorly dark fuscous. Antennæ grey. Thorax brownish-grey, with a few scattered dull carmine-pink scales. Abdomen whitish-ochreous. Anterior legs deep carmine, beneath whitish; middle and posterior legs ochreous-whitish, the four apical joints of tarsi suffused with grey at base. Forewings moderate, oblong, costa more strongly arched towards base, apex bluntly rectangular, hindmargin straight, hardly oblique; grey, coarsely and irregularly irrorated with dull light purplish-carmine scales, the coalescence of which tends to form suffused fuscous-purple markings; costal edge slenderly bright crimson throughout, extreme tips of scales whitish except near base; a small deep carmine spot on inner margin near base; a cloudy fuscous-purplish slender oblique transverse fascia from $\frac{1}{3}$ of costa to middle of inner margin, slightly curved outwards, tolerably distinct on upper half, but very suffused and indistinct beneath; a small cloudy fuscous-purplish spot on costa rather beyond middle; a very small fuscous-purplish spot in disc beyond middle, between which anal angle is a cloudy suffusion; an irregular fuscous-purplish hindmarginal line: cilia carmine-pink, becoming whitish-grey towards anal angle. Hindwings with

hindmargin not sinuate; grey, becoming whitish-grey towards base; cilia grey, at anal angle whitish-grey, with an indistinct darker line near base.

A richly-coloured species, closely allied to *H. inceptella*, but considerably darker, and rather broader-winged, with the anterior fascia distinct, but the posterior line obliterated.

One fine specimen taken at Sydney in September.

35. *Hel. inceptella*, Walk.

(*Cryptolechia inceptella*, Walk, Brit. Mus. Cat., 759.)

Media, alis ant. argillaceis, purpureo-sparsis, margine costali roseo, linea antica obliqua, altera postica flexuosa, macula costæ ante apicem, punctisque disci tribus purpureis; post. albido-griseis.

♂ ♀. 20–25 mm. Head, palpi, antennæ, and thorax pale greyish-ochreous, second joint of palpi somewhat mixed with carmine externally. Abdomen whitish-ochreous. Anterior tibiæ and tarsi deep fuscous-carmine, tarsal joints with obscure whitish apical rings; middle and posterior tibiæ and tarsi ochreous-whitish. Forewings moderate, oblong, costa moderately arched towards base, posteriorly straight, apex obtusely rectangular, hindmargin straight, not oblique; ochreous-grey-whitish, thinly and coarsely strewn with fuscous-purple scales; extreme costal edge bright crimson throughout; a very small fuscous-purple spot on inner margin close to base; a narrow cloudy fuscous-purple streak from costa before $\frac{1}{3}$ very obliquely outwards, attenuated posteriorly, not reaching beynd middle of wing, rarely continued very suffusedly to middle of inner margin; two obscure fuscous-purple dots in disc at $\frac{1}{4}$, one above the other, the lower often connected with inner margin before middle by a suffused oblique purplish streak; a dark purple-fuscous dot in disc beyond middle, through which sometimes passes a very faint, generally obsolete strongly curved purplish line from extremity of oblique

costal streak to inner margin beyond middle; a small cloudy fuscous-purple spot on costa beyond middle, whence proceeds a cloudy, strongly outwards-curved, somewhat dentate purplish line to anal angle; a small flattened-triangular fuscous-purple spot on costa at $\frac{3}{4}$, almost confluent with this line: cilia on upper half of hindmargin grey-whitish suffused with pale carmine, and with a broad suffused fuscous-purple basal line, on lower half grey-whitish. Hindwings elongate, hindmargin slightly sinuate; ochreous-whitish, in male faintly, in female more strongly suffused with pale grey towards hindmargin, apex more ochreous-tinged; cilia ochreous-whitish, with a faint grey spot at apex, sometimes with a faint grey line.

Slightly narrower-winged than the preceding, much paler and more clay-coloured, with duller markings, and distinct discal dots and posterior line.

Common at Sydney on fences, and also at Blackheath on the Blue Mountains (3,500 feet) in October and November, apparently attached to *Eucalyptus.*

36. *Hel. severa*, n. sp.

Minor, alis ant. griseis, pallido-sparsis, punctis disci tribus maculaque marginis postici sub apice saturatioribus; post. griseis.

♀. 18 mm. Head and palpi whitish-ochreous mixed with greyish-fuscous. Antennæ whitish-ochreous, obscurely annulated with fuscous. Thorax greyish-fuscous, coarsely mixed with whitish-ochreous. Abdomen whitish-ochreous, suffused with grey. Anterior tibiæ and tarsi greyish-fuscous, with whitish rings at apex of joints; middle tibiæ ochreous-whitish mixed with grey, tarsi grey with whitish rings at apex of joints; posterior tibiæ and tarsi whitish. Forewings moderate, costa gently arched, apex rather obtuse, hindmargin slightly concave, rather oblique; greyish-fuscous, coarsely strewn with ochreous-whitish scales, more thickly towards hindmargin; a dark fuscous dot in disc

before middle, a larger one in disc beyond middle, and a third on fold rather obliquely beyond first; a small cloudy ill-defined dark fuscous somewhat triangular spot along upper half of hindmargin: cilia pale whitish-fuscous mixed with whitish, with a fuscous spot at apex. Hindwings with hindmargin distinctly sinuate; fuscous-grey, rather darker posteriorly; cilia grey, darker towards base.

This and the three following species resemble one another in their small size and form of wing; the present species differs from all the rest by its dull fuscous-grey colouring on all wings.

One specimen taken at Sydney in November.

37. *Hel. limbata*, n. sp.

Minor, alis ant. fusco-griseis, pallido-sparsis, punctis disci tribus saturatioribus; post. flavis, late nigro-marginatis.

♀. 18 mm. Head and palpi whitish-ochreous, somewhat mixed with fuscous. Antennæ whitish-ochreous, sharply annulated with dark fuscous. Thorax greyish-fuscous, mixed with whitish-ochreous. Abdomen greyish-ochreous. Anterior and middle tibiæ ochreous-whitish mixed with dark fuscous, tarsi dark fuscous becoming whitish towards apex of joints; posterior tibiæ and tarsi ochreous-whitish. Forewings rather elongate, costa gently arched, apex obtuse, hindmargin oblique, slightly rounded; reddish-fuscous, coarsely and irregularly strewn with ochreous-whitish scales; a dark fuscous dot in disc before middle, a second in disc beyond middle, connected with first by a line of ochreous-whitish scales, and a third on fold obliquely beyond first: cilia ochreous-whitish mixed with fuscous, more greyish at anal angle, mixed with reddish at apex. Hindwings with hindmargin rounded; yellow, apex and hindmargin broadly suffused with blackish-grey; cilia dark grey, becoming darker towards base.

Very similar to *H. severa*, but with yellow hindwings.

I have one specimen, taken by Mr. G. H. Raynor near Melbourne.

38. *Hel. hemiscia*, n. sp.

Minor, alis ant. albis, macula dorsi basim versus magna, altera dorsi media, punctis disci duobus, linea postica transversa angulata, fasciaque marginis postici griseo-fuscis ; post. albido-griseis.

♂. 16 mm. Head white, mixed with grey. Palpi white, second joint with a broad suffused dark grey band before apex, terminal joint anteriorly dark grey. Antennæ whitish, annulated with dark grey. Thorax white, mixed with grey, with a grey spot posteriorly. Abdomen with basal third white, rest whitish-ochreous with segments suffused above with brownish-ochreous except on margins. Anterior tibiæ and tarsi grey with whitish rings at apex of joints ; middle and posterior legs whitish. Forewings moderate, rather dilated posteriorly, costa gently arched, apex acute, hindmargin rather concave, oblique ; white, towards costa faintly greyish-tinged ; a dark fuscous blotch on inner margin, extending almost from base to $\frac{2}{5}$, terminated above by the fold, posteriorly lighter and ill-defined ; an ill-defined cloudy fuscous subquadrate blotch beyond this, extending on inner margin from before middle to $\frac{3}{4}$, reaching rather more than half across wing ; a dark fuscous dot in disc before middle, confluent with anterior angle of this blotch, and a small dark fuscous spot in disc beyond middle, connected with posterior edge of blotch near inner margin by a curved row of three smaller fuscous spots ; a dark fuscous ill-defined partially interrupted transverse line from just below costa at $\frac{2}{3}$ to before anal angle, angulated outwards in disc ; a straight suffused dark fuscous line from costa a little before apex to hindmargin just above anal angle, beyond which the ground colour is suffused with pale grey, forming a narrow hindmarginal band : cilia grey-whitish, with a faint grey line near base. Hindwings with apex almost acute, hindmargin rather strongly sinuate ; whitish-grey, towards base whitish ; cilia whitish-grey.

A very distinct species, differing from all others in the white ground colour.

I have one specimen taken by Mr. G. H. Raynor near Parramatta in September, and have seen others from the same locality.

39. *Hel. pelosticta*, n. sp.

Minor, alis ant. dilute ochreis, partim rufo-sparsis, basi, fascia antica angusta, alteraque marginis postici supra magnopere dilatata purpureo-fuscis; post. albidis.

♂. 15 mm. Head whitish-ochreous, more ochreous on crown. Palpi whitish-ochreous, mixed with dark fuscous. Antennæ whitish-ochreous. Thorax dark purplish-fuscous. Abdomen whitish-ochreous. Anterior tibiæ and tarsi dark purplish-fuscous, with obscure whitish-ochreous rings at apex of tarsal joints; middle and posterior legs whitish, middle tarsi somewhat suffused with greyish. Forewings moderate, costa moderately arched, apex tolerably acute, hindmargin straight, rather oblique; whitish-ochreous, irregularly suffused with whitish-yellow, towards inner margin mixed with fuscous-reddish; a small dark purple-fuscous spot at base of wing; an irregular cloudy purplish-fuscous spot on costa before middle, connected with inner margin near base by a straight narrow ill-defined purplish-fuscous streak; a small cloudy purplish-fuscous spot on middle of inner margin; a dark fuscous-purple well-defined hindmarginal band from apex to anal angle, darkest on costa, where it is broad and extends from $\frac{3}{5}$ to apex, attenuated thence to anal angle, its anterior edge rather strongly concave, and margined with dark fuscous: cilia purple, becoming dark grey at anal angle. Hindwings with hindmargin slightly sinuate; ochreous-whitish, extreme apex grey; cilia ochreous-whitish, with a very faint grey line.

Distinctly characterised by its small size, light ochreous forewings with purplish-fuscous markings, and ochreous-whitish hindwings.

Two specimens taken at Murrurundi, New South Wales, in November.

40. *Hel. elæodes*, n. sp.

Media, alis ant. griseis, margine costali ochrea, litura transversa dorsi media, altera anguli analis, tertia marginis postici, punctisque disci tribus purpureis ; post. griseis.

♀. 25 mm. Head ochreous-yellow, face and crown paler. Palpi whitish-yellowish, second joint with a suffused grey subapical ring, becoming whitish towards base, terminal joint anteriorly grey. Antennæ dark grey. Thorax rather light grey, anterior margin suffusedly ochreous-yellow. Abdomen ochreous-whitish. Anterior and middle tarsi and tibiæ dark grey, apex of all joints and an indistinct median ring of tibiæ whitish ; posterior tibiæ whitish, tarsi grey with whitish rings at apex of joints ; femora beneath white. Forewings moderate, costa moderately and evenly arched, apex obtusely rectangular, hindmargin somewhat sinuate, rather oblique : rather light grey ; costal edge ochreous-yellow ; a purple dot in disc before middle, a second in disc beyond middle, and a third on fold obliquely beyond first ; a small ill-defined purplish spot on inner margin at $\frac{1}{4}$; a narrow oblique cloudy purple streak from middle of inner margin, extending to second discal dot, and touching third dot with anterior margin, attenuated to extremity ; a few scattered purple scales beyond this ; an irregular dark purple line from a little before hindmargin in middle to anal angle, strongest beneath ; hindmargin narrowly suffused with dark fuscous-purple from apex to below middle : cilia ochreous-grey-whitish, with a dark purple-fuscous spot at apex, and suffused with dark purple at base on upper half of hindmargin. Hindwings pale dull greyish-ochreous, posteriorly suffused with dark grey ; cilia grey, with a darker spot above apex.

A very distinct species, separated from all others by the yellow costa contrasted with the grey ground colour of the forewings.

Larva feeding gregariously on *Eucalyptus sp.*—("White Gum") in a large nest of leaves and silk; pupa in the same position. Imago emerges at intervals during November.

I received a specimen of this species from Mr. E. Guest, who informs me that it is very common in the larva state on Mount Lofty range, near Adelaide, and very easy to rear, but never found at large in the imago state; in these particulars, as well as in the larval habits communicated by him, it agrees precisely with *H. hemiteles.*

41. *Hel. hemiteles*,, n. sp.

Media, alis ant. flavis, macula dorsi, fascia marginis postici utrimque attenuata, interdum macula costæ media suffusa angulum analem versus producta purpureis, puncto disci nigro; post. griseis.

♂ ♀. 19–23 mm. Head deep yellow, face paler. Palpi ochreous-white at base, second joint dark fuscous mixed with whitish, apex yellow, terminal joint yellow, apex dark fuscous anteriorly. Antennæ dark fuscous. Thorax deep yellow, anterior margin and a square spot on anterior half of back dark purplish-fuscous. Abdomen ochreous-whitish. Anterior and middle tibiæ and all tarsi dark fuscous, apex of joints very narrowly ochreous-whitish; posterior tibiæ whitish-ochreous; femora beneath white. Forewings moderate, costa gently and evenly arched, apex round-pointed, hindmargin sinuate, moderately oblique; deep yellow; costal edge paler, at base dark fuscous; a dark fuscous-purple quadrilateral blotch on inner margin beyond middle, upper anterior angle on fold, upper posterior angle reaching half across wing, terminating in a dark fuscous dot, posterior side rather suffused; a moderate dark fuscous-purple hindmarginal band, attenuated to a point at apex and anal angle, anterior edge rounded, apical extremity dark fuscous; sometimes a very irregularly quadrilateral suffused dark fuscous-purple blotch on middle of costa, sometimes connected with inner margin by a fuscous-purple suffusion between dorsal

blotch and hindmarginal band, but this blotch and suffusion are often wholly absent; rarely a minute dark fuscous dot in disc before middle: cilia on hindmargin fuscous-purple, with an indistinct dark grey line, towards tips yellowish, at apex and anal angle wholly grey, on costa yellow. Hindwings rather dark grey, lighter towards base, cilia grey.

The bright yellow forewings distinguish this species from all but *H. paralyrgis*, which has also yellow hindwings.

Larva stout, slightly tapering at both ends; rather light purplish-grey or reddish-grey, spots minute, blackish; dorsal, sub-dorsal, and interrupted spiracular lines very irregular, slender, grey-whitish; other irregular scattered grey-whitish marblings on sides; second, third, and anal segments sprinkled with blackish dots; head greyish-ochreous, marbled with ochreous-whitish. Feeds amongst spun together leaves of *Eucalyptus tereticornis*, several larvæ together forming an irregular nest of web and discoloured leaves; pupa in same position. These larvæ are found in August, and are extremely easy to rear; the imagos appear to emerge irregularly from August to November.

Common round Sydney and Melbourne, but hardly ever met with in the perfect state.

Types of this species stand in the British Museum as *Oecophora semiruptella*, Walk., 684, but the description is obviously not drawn from this species, the ground colour being stated to be between brick-red and rose-colour, and all the details inconsistent; some error must exist, and Walker's name must be wholly rejected as unidentifiable.

42. *Hel. phylarcha*, n. sp.

Magna, alis ant. griseis, angulum analem versus late purpureo-suffusis, margine costali roseo, puncto disci saturatiore; post. læte flavis, latius nigro-marginatis.

♀. 31 mm. Head brownish-grey, face more yellowish, on sides fuscous. Palpi pale greyish-ochreous, second joint suffused with dark grey anteriorly and externally except at base and apex, and crimson-tinged internally, terminal joint dark grey anteriorly. Antennæ grey, towards base crimson-tinged. Thorax brownish-grey, posterior extremity crimson-tinged. Abdomen yellowish. Anterior and middle legs dark fuscous-crimson, apex of tarsal joints lighter crimson; posterior tibiæ yellow, tarsi crimson, suffused with grey towards base of joints; all legs beneath yellowish, suffused with crimson. Forewings moderately broad, costa anteriorly rather strongly arched, posteriorly nearly straight, apex obtuse, hindmargin sinuate beneath apex, slightly oblique; brownish-grey, with a broad ill-defined purplish suffusion extending from $\frac{1}{4}$ along inner margin and hindmargin to apex, attenuated to extremities; costal edge crimson; a very ill-defined dark grey dot on fold before middle, and a second in disc beyond middle; indications of a very suffused cloudy fuscous-purplish angulated transverse fascia in disc at about $\frac{5}{6}$; a hindmarginal row of obscure dark fuscous dots: cilia fuscous-purplish. Hindwings golden-yellow, with a well-defined rather narrow blackish-fuscous hindmarginal border, considerably dilated at apex; cilia dark grey, more blackish at apex.

Closely allied to *H. triphænatella*, from which the most reliable point of distinction is probably the well-marked crimson suffusion of the legs beneath; other characters (which may be liable to variation) are the larger size, the much greyer, darker, and glossier forewings, the purple cilia, the deeper yellow hindwings, with much more sharply-defined border.

Two specimens taken on a fence near Sydney in September, during a high wind.

43. *Hel. triphænatella*, Walk.

(*Cryptolechia triphænatella*, Walk., Brit. Mus. Cat., 753; *Cryptolechia oecophorella*, ibid. 760.)

Media, alis ant. ochreis, angulum analem versus plus minusve purpureo-suffusis, margine costali roseo, punctis disci tribus, serie punctorum postica transversa, alteraque marginis postici saturate fuscis, interdum partim obsoletis ; post. flavis, margine postico nigro-suffuso.

♂ ♀. 24½–25 mm. Head ochreous, face lighter. Palpi light ochreous, more greyish anteriorly, slightly reddish-tinged on sides. Antennæ greyish-ochreous. Thorax light greyish-brown-ochreous, posterior extremity sometimes dark fuscous. Abdomen whitish-ochreous, towards base whitish-yellow. Anterior tibiæ and tarsi dark fuscous, slightly carmine-tinged, tarsal joints with apical whitish rings ; middle and posterior legs ochreous-whitish, middle tarsi suffused with grey towards base of joints ; all legs ochreous-white beneath. Forewings moderate, costa moderately arched, rather more strongly towards base, apex obtuse, hindmargin almost straight, slightly oblique ; greyish-ochreous, slightly mixed with brownish-ochreous ; costal edge light crimson throughout ; a purplish suffusion, mixed with dark fuscous, forming a cloudy blotch on middle of inner margin, sometimes broadly produced over anal angle and hindmargin to apex as a suffused band ; a dark fuscous dot in disc before middle, and a second obliquely beyond it on fold ; a small dark fuscous spot in disc beyond middle, and a similar more cloudy spot obliquely beyond and beneath it ; a nearly straight row of about six dark fuscous rather crescentic dots from disc at ⅘ to inner margin at ⅘, its upper extremity tending to be connected with costa beyond middle by one or two dark scales ; a hindmarginal row of blackish dots ; these rows of dots are sometimes obscured by the hindmarginal suffusion : cilia grey-whitish suffused with light purplish except towards anal angle. Hindwings with hindmargin scarcely sinuate ; light yellow, in male very narrowly, in female more broadly suffused with dark fuscous-grey along hindmargin ; cilia grey, towards base blackish-grey.

Smaller than the preceding, with the legs nearly white beneath, without crimson suffusion ; the ground colour more ochreous and the markings much more distinct, the hindwings lighter and less sharply margined.

Rather common at Melbourne, whence I have received specimens taken by Mr. G. H. Raynor.

44. *Hel. paralyrgis*, n. sp.

Media, alis ant. flavis, macula postica magna purpurea a medio dorso usque ad apicem perducta, puncto disci, altero plicæ, serieque punctorum postica transversa in macula saturate fuscis; post. flavis, apice ciliisque saturate griseis.

♂. 25 mm. Head yellow, face paler. Palpi pale yellowish, second joint anteriorly suffused with light grey, apex of terminal joint grey. Antennæ dark fuscous. Thorax dark purplish-fuscous, tegulæ yellow. Abdomen grey, anal tuft mixed with yellowish. Anterior and middle legs dark fuscous; posterior tibiæ whitish-yellow, tarsi dark grey with whitish-yellow rings at apex of joints ; all femora pearly white beneath. Forewings moderate, costa moderately and evenly arched, apex obtuse, hindmargin straight, rather oblique ; light yellow ; costal edge dark grey towards base ; base of inner margin grey ; an irregular rather broad fuscous-purple blotch extending along inner margin from before middle up hindmargin to apex, extremities blunt, hardly attenuated, upper edge irregular, reaching costa before apex ; a cloudy dark grey dot on fold below middle, resting on edge of blotch, and a second in disc beyond middle, connected with edge of blotch by a triangular tooth of the latter ; an ill-defined irregular dentate dark grey transverse line running from upper edge of blotch a little below costa to anal angle: cilia light crimson-purplish, posteriorly becoming grey-whitish, above apex and on anal angle grey, on costa yellow. Hindwings light golden-yellow, somewhat deeper posteriorly, apex and hindmargin very slenderly

suffused with dark grey; basal hairs suffused with grey; cilia dark grey.

Specially characterised by having both forewings and hindwings yellow.

Larva stated by Mr. E. Guest to form a curious flat case by joining two gum-leaves (*Eucalyptus sp.*) together edgewise, something in the form of a boat. This singular habit seems to require further investigation.

I received a specimen from Mr. E. Guest, who informs me that it is one of the commonest insects on the Mount Lofty Range, Adelaide, in November and December.

45. *Hel. protoxantha*, n. sp.

Media, alis ant. dilute griseo-carneis, punctis disci tribus serieque punctorum postica angulata saturate griseis; post. dilute flavis, ciliis apicis griseis.

♂. 23 mm. Head, palpi, and thorax whitish-ochreous mixed with light greyish-brown, palpi anteriorly whitish towards base. Antennæ whitish-ochreous. Abdomen whitish-ochreous. Anterior legs light dull ochreous, slightly crimson-tinged; middle and posterior legs ochreous-whitish, middle tarsi more ochreous towards base of joints; legs beneath ochreous-white. Forewings moderate, oblong, costa strongly arched anteriorly, very slightly posteriorly, apex obtuse, hindmargin sinuate, slightly oblique; light greyish-pink, thickly strewn with whitish-ochreous scales, costal edge very narrowly whitish-ochreous, near base suffused with light crimson; a greyish-fuscous dot in disc before middle, a second in disc beyond middle, and a third very obliquely beyond first on fold; a cloudy greyish-fuscous transverse line, obscurely interrupted between veins, from middle of costa very obliquely outwards, in middle of disc bent obtusely inwards, and continued to inner margin before anal angle; a row of obscure dark greyish-fuscous dots on hindmargin: cilia very pale pinkish, mixed with

grey, tips ochreous-whitish. Hindwings light ochreous-yellow, paler towards base; cilia pale ochreous-yellow, becoming grey round apex.

Differs from all the preceding allied species by the pale yellow cilia of the hindwings; the succeeding species have much broader forewings, with more strongly arched costa, and more rosy colouring.

One specimen received from Mr. G. Barnard, taken at Coomooboolaroo, near Duaringa, Queensland.

46. *Hel. parthenopa*, n. sp.

Major, alis ant. carneis, margine costali ciliisque roseis, punctis disci tribus minimis, serieque punctorum postica angulata saturate fuscis; post. dilute flavis.

♂. 26 mm. Head and thorax light ochreous-fuscous, pinkish-tinged, face and collar whitish-ochreous. Palpi dull pink, becoming whitish towards base. Antennæ grey, basal joint reddish-fuscous. Abdomen whitish-ochreous. Anterior tibiæ and tarsi dull light crimson; middle legs ochreous-whitish, tarsal joints greyish towards base, tarsi and base of tibiæ faintly crimson-tinged; posterior legs yellowish-whitish; all femora beneath yellowish-whitish. Forewings rather broad, costa strongly and evenly arched, apex obtuse, hindmargin slightly sinuate, hardly oblique; light fuscous-pinkish; costal edge pale crimson; a minute dark fuscous dot in disc before middle, a second in disc beyond middle, and a third on fold obliquely beyond first; a faintly indicated transverse row of minute dark fuscous dots proceeding from about middle of costa very obliquely outwards, bent obtusely in middle, and continued to inner margin before anal angle; a row of very faintly indicated dark fuscous dots on hindmargin: cilia pale crimson, tips more whitish. Hindwings and cilia very pale ochreous-yellowish.

This and the two following species are broader-winged than the rest of the genus, resembling in form the typical species of *Hoplitica*. In simplicity of marking this species approaches *H. protoxantha*, but is rosier, and the apical cilia of hindwings are not greyish-tinged.

One specimen received from Mr. E. Guest, who states that it is a common autumnal species on the Mount Lofty Range, Adelaide.

47. *Hel. euselma*, n. sp.

Major, alis ant. dilute rufis, margine costali ciliisgue roseis, fascia media nebulosa serieque punctorum postica angulata saturate fuscis; post. dilute flavis, ♀ postice griseo-suffusis, ciliis apicis leviter roseis.

♂ ♀. 29 mm. Head whitish-ochreous, on crown suffused with light reddish-fuscous. Palpi light brownish-rosy. Antennæ grey, basal joint brown. Thorax light reddish-fuscous, slightly mixed with whitish-ochreous. Abdomen pale whitish-ochreous. Anterior and middle tibiæ and tarsi light fuscous-crimson; posterior legs very pale whitish-ochreous, tarsi faintly crimson-tinged; all femora beneath whitish. Forewings rather broad, costa rather strongly and evenly rounded, apex obtuse, hindmargin slightly sinuate, not oblique; rather light ochreous-brown; costal edge light crimson; a moderately broad very ill-defined straight rather oblique dark purple-fuscous fascia from before middle of costa to beyond middle of inner margin, narrowed and almost obsolete on costa, abruptly dilated in middle into a blunt projecting tooth on both edges; a transverse row of somewhat triangular cloudy dark fuscous dots from middle of costa very obliquely outwards, obtusely angulated in middle, and continued to inner margin before anal angle; cilia light crimson, tips rosy-whitish. Hindwings pale whitish-yellow, slightly darker posteriorly, in female somewhat greyish-suffused towards hindmargin; cilia whitish-yellow, round apex rosy-tinged.

Easily known by the central cloudy fascia.

One specimen taken at Launceston, Tasmania, at the end of January, and a second received from Mr. E. Guest, who states that it is very common during the autumn on the Mount Lofty Range, Adelaide.

48. *Hel. rufogrisea*, n. sp.

Media, alis ant. albido-griseis, fere omnino rufo-suffusis, margine costali ciliisque roseis, basi, fasciis duabus angustis obliquis, tertia marginis postici, punctisque plerisque sparsis purpureis; post. griseis, basim versus pallidioribus.

♂ ♀. 21½–24 mm. Head light grey, suffused with reddish-fuscous on crown. Palpi with second joint whitish-rosy, terminal joint whitish, anteriorly dark fuscous tinged with carmine. Antennæ grey, basal joint rosy. Thorax reddish-fuscous mixed with whitish-grey, suffusedly darker fuscous towards middle of anterior margin. Abdomen pale whitish-ochreous. Anterior tibiæ and tarsi deep carmine; middle tibiæ and tarsi ochreous-whitish, base of all joints suffused with carmine; posterior tibiæ and tarsi ochreous-whitish. Forewings broad, costa strongly and evenly arched, apex rectangular, blunt, hindmargin straight, hardly oblique; rather light reddish-ochreous-fuscous, with scattered grey-whitish scales; base of wing narrowly dark purple-fuscous; costal edge bright carmine throughout; two slender suffused fuscous-purple transverse fasciæ; first from $\frac{1}{3}$ of costa to middle of inner margin, very slightly curved outwards; second from $\frac{2}{3}$ of costa to anal angle, attenuated on lower half so as to form a strongly dentate line; before first fascia the ground colour is more or less suffused with grey-whitish towards disc, and also between second fascia and apex; some small transverse ill-defined fuscous-purple marks arranged in an obliquely transverse row between first fascia and base, and a similar row midway between first and second fasciæ; a suffused fuscous-purple streak along hindmargin from apex nearly to anal angle, dilated above middle,

attenuated at lower extremity; cilia rosy, with a fuscous-purple apical spot. Hindwings with hindmargin slightly indented; in male light grey suffused with whitish-ochreous towards costa and base, in female darker grey; cilia grey, suffused with rosy beneath apex, at anal angle becoming ochreous-whitish.

Very distinct through the two parallel fasciæ.

Two specimens taken near Sydney in February and March, beaten from *Eucalyptus*.

9. EUCHÆTIS, *n. g.*

Head with appressed scales, side-tufts moderate, spreading. Antennæ in male moderate, with fine very long ciliations (5), basal joint short, stout, with pecten of one or two fugitive scales. Palpi moderately long, second joint somewhat exceeding base of antennæ, clothed with appressed scales, almost smooth, terminal joint shorter than second, slender, recurved. Thorax smooth. Forewings elongate-oblong, apex rounded, hindmargin oblique, slightly sinuate. Hindwings as broad as forewings, ovate, hindmargin faintly sinuate beneath apex, cilia $\frac{1}{3}$. Abdomen moderate. Middle tibiæ thickened with dense loose hairs; posterior tibiæ clothed with dense hairs above. Forewings with vein 7 to hindmargin, 2 from somewhat before angle of cell. Hindwings with vein 5 bent and strongly approximated to 4 at base.

The basal approximation of veins 4 and 5 of the hindwings, and the absence of a complete basal pecten of the antennæ, clearly refer this genus to the group of *Hoplitica*, amongst which it is characterised by the very long antennal ciliations; but its immediate affinities are not clear. Further evidence is required to ascertain its origin; meanwhile I place it between *Heliocausta* and *Euryplaca*, to both of which it seems to have some relationship.

49. *Euch. habrocosma*, n. sp.

Media, alis ant. albido-ochreis, costam versus roseo-griseis, costa rosea, linea antica obliqua alteraque subterminali saturate

ferrugineis, spatio incluso præter costam ferrugineo, ad medium saepe nigro commixto, punctis disci quattuor longitudinaliter positis ac margine postico niveis ; post. ochreo-albidis.

♂. 17–23 mm. Head and thorax grey-whitish, middle of back ferruginous. Palpi dull pink, second joint more whitish towards base and at extreme apex, suffusedly fuscous before apex. Antennæ grey, towards base pinkish. Abdomen whitish, anal tuft ochreous-tinged. Anterior legs bright carmine ; middle and posterior legs whitish, more or less carmine-tinged, especially on tarsi. Forewings moderate, costa gently arched, more strongly at base, apex rounded, hindmargin oblique, slightly sinuate ; whitish-ochreous ; costa broadly suffused with pale crimson-grey, costal edge crimson : a short dark ferruginous linear mark at base beneath costa ; a short oblique dark ferruginous mark from costa at $\frac{2}{5}$, and an oblique transverse dark ferruginous line from inner margin near base, meeting costal mark beneath costa ; a row of four or five irregular dark ferruginous spots, extending beneath costa from costal mark nearly to apex, connecting with a curved subdentate dark ferruginous line very near and parallel to hindmargin, extending from beneath apex to inner margin before anal angle ; the whole space included between the anterior and posterior transverse lines, and the subcostal row of spots and inner margin, is strongly suffused with ochreous and ferruginous, sometimes mixed with whitish below middle ; disc sometimes irrorated with black, more thickly in centre, so as to form a darker blotch ; two small transverse snow-white spots longitudinally placed in disc at $\frac{1}{3}$, separated by a small bright ochreous spot, anterior one posteriorly concave ; two other small transverse snow-white spots longitudinally placed in disc at $\frac{2}{3}$, separated by a small bright ochreous spot, posterior one suffusedly produced towards inner margin before anal angle as a short ochreous-whitish streak ; hindmargin beyond subterminal line rosy-white ; a small cloudy ferruginous spot immediately before apex, mixed

with grey: cilia light pink, mixed with whitish-grey. Hindwings and cilia yellowish-whitish.

A singular and very elegant insect.

Three specimens taken on a fence near Sydney in September, during a high wind.

50. *Euch. metallota*, n. sp.

Major, alis ant. rufis, albo-sparsis, margine costali dilute roseo, maculis disci duabus flavis, tertia dorsi ad basim, signorum serie triangularium ante marginem posticum, quattuor etiam sub costa niveis; post. flavis.

♀. 29 mm. Head whitish, mixed on crown with dark reddish-fuscous. Palpi whitish, second joint with a rather suffused dark reddish-fuscous subapical band. Antennæ light fuscous. Thorax ochreous-whitish, on back and posteriorly reddish-fuscous mixed with whitish. Abdomen whitish-ochreous. Anterior legs deep carmine, tarsi with suffused whitish rings at apex of joints; middle and posterior legs ochreous-whitish, middle tarsi slightly carmine-tinged. Forewings moderate, costa moderately arched, more strongly at base, apex obtuse, hindmargin straight, slightly oblique; light reddish-fuscous, coarsely irrorated with dark fuscous and white scales, the dark scales predominating towards costal half and base; extreme costal edge suffused with pale crimson, most distinctly near base; veins slenderly and irregularly lined with white; two very small whitish spots on costa near base; a small rectangular clear white spot on inner margin at base; a small square white spot in disc about $\frac{1}{4}$, anterior and posterior edges somewhat excavated; between its posterior edge and costa rather before middle are three very small roundish white spots, arranged in an outwardly curved line; an obsolete semi-oval patch on inner margin from before middle to $\frac{4}{5}$ is obscurely suffused with whitish, mixed with light reddish-fuscous; a white dot on fold somewhat before middle of wing; a small roundish

white spot in disc beyond middle; obliquely above and beyond this is a small more suffused white spot in disc beyond middle; obliquely above and beyond this is a small more suffused white spot, above which are three small subquadrate almost connected white spots, arranged in a very oblique slightly curved row; a row of seven small almost connected triangular white spots along hindmargin, surrounded by dark fuscous scales: cilia reddish-whitish, becoming grey towards anal angle, base dark fuscous. Hindwings with hindmargin very slightly sinuate; pale yellow, towards base whitish-yellow; cilia pale yellow.

Larger than the preceding, with more numerous white spots, the hindmarginal white streak forming a chain of triangular spots, and the hindwings yellow.

I received one specimen through the kindness of Dr. J. C. Cox, of uncertain locality. The male being unknown, its reference is not assured; but it seems to be undoubtedly allied to the preceding species.

10. EURYPLACA, *Meyr.*

Head with appressed scales, sidetufts large, meeting above, loosely appressed. Antennæ moderate, in male moderately ciliated (1), basal joint moderately stout, with a fugitive pecten of two or three hair-scales. Palpi moderate, second joint reaching or exceeding base of antennæ, with smooth appressed scales, terminal joint shorter than second, rather stout, recurved. Thorax smooth. Forewings elongate, rather broad, apex obtusely rectangular, hindmargin slightly oblique. Hindwings hardly narrower than forewings, oblong-ovate, hindmargin faintly sinuate, cilia $\frac{1}{3}$. Abdomen broadly dilated, distinctly flattened, strongly margined. Posterior tibiæ with dense appressed hairs. Forewings with vein 7 to hindmargin, 2 from before angle of cell. Hindwings normal.

Closely allied to *Heliocausta*, from which it is distinguished principally by the broadly dilated and rather flattened abdomen.

The genus is clearly a development from *Heliocausta*, and probably forms a transitional step to *Hoplitica*.

51. *Eur. ocellifera*, n. sp.

Minor, alis ant. dilute ochreis, dorsi basi lineaque postica transversa nigrescentibus, macula maxima media saturate purpureo-grisea, maculas duas glaucas nigro-cinctas conjunctas includente; post. griseis, basi albido-ochrea.

♂. 14½–17 mm. Head light ochreous, face whitish-ochreous. Palpi whitish-ochreous, second joint white beneath. Antennæ whitish-ochreous, sharply annulated with dark fuscous. Thorax dark purplish-fuscous, anterior margin broadly pale ochreous. Abdomen whitish-yellow. Legs white, anterior and middle tibiæ mixed with grey, tarsal joints dark grey towards base, posterior tibiæ and tarsi yellowish-tinged above. Forewings moderate, costa moderately arched, apex obtuse, hindmargin rather oblique, rounded; pale ochreous; a small cloudy dark purplish-fuscous semi-oval spot on inner margin near base; a large roundish well-defined dark purplish-fuscous blotch in middle of disc, occupying central third of wing, above almost touching costa in middle, beneath extending on inner margin from beyond middle to above anal angle; within this blotch in disc are two rather large roundish spots of whitish-blue scales mixed with blackish, each surrounded with a suffused blackish ring, one before, the other beyond middle, partially confluent in middle, posterior rather larger and more strongly margined; midway between this blotch and apex is an outwardly-curved cloudy dark fuscous transverse line, most distinct in middle, its extremities directed towards costa beyond middle and anal angle, but not distinctly reaching either; two or three dark fuscous-grey scales on hindmargin round apex: cilia pale ochreous, tips whitish, cilia beneath anal angle dark grey. Hindwings with hindmargin slightly sinuate; rather dark fuscous-grey, towards base and costa whitish-ochreous; cilia whitish-ochreous, becoming grey along lower margin, sometimes

wholly grey except on costa and inner margin, with base round apex ochreous.

A very peculiarly marked and distinct species.

Not uncommon round Sydney from October to December, frequenting *Acacia decurrens*, and also at Hobart, Tasmania, in January.

52. *Eur. demotica*, n. sp.

Major, alis ant. griseo-fuscis, punctis disci tribus minimis serieque punctorum postica angulata obscuris saturatioribus; post. griseis, apicem versus latius albidis.

♂ ♀. 23–33 mm. Head and thorax fuscous-grey or reddish-grey-fuscous. Palpi grey-whitish, sometimes reddish-tinged, second joint greyer towards apex, white at base. Antennæ whitish-grey, semi-annulated with dark fuscous. Abdomen whitish-grey, sometimes ochreous-tinged. Anterior and middle legs dark grey, tarsi with obscure whitish rings at apex of joints; posterior legs whitish-grey; all legs white beneath. Forewings large, moderately broad, somewhat dilated posteriorly, costa moderately arched, apex obtuse, hindmargin somewhat oblique, straight above, rounded beneath; greyish-fuscous, sometimes slightly reddish-tinged; extreme costal edge very slenderly whitish towards middle; a dark fuscous dot in disc before middle, a second in disc beyond middle, and a third obliquely beyond first on fold; a very indistinct row of small dark fuscous crescentic marks from costa about middle very obliquely outwards to disc at $\frac{4}{5}$, thence bent sharply inwards and continued to inner margin a little before anal angle; a row of faint dark fuscous dots along hindmargin and apical third of costa: cilia light greyish-fuscous, often reddish-tinged, extremities more whitish. Hindwings trapezoidal, hindmargin markedly indented; ochreous-whitish, towards inner margin broadly suffused with light grey, apex and hindmargin very slenderly suffused with light grey; cilia pale whitish-grey.

In general appearance recalling the larger species of *Hoplitica*, from which it may be superficially distinguished by the reversed colouring of the hindwings.

Not uncommon at Blackheath in the Blue Mountains (3,500 feet) in January, beaten from *Eucalyptus;* also at Melbourne.

11. Atelosticha, *n. g.*

Head loosely haired, sidetufts large, dilated posteriorly. Antennæ in male moderate, somewhat serrate, moderately and evenly ciliated (1), basal joint rather stout, without pecten. Palpi moderate, second joint not reaching base of antennæ, thickened with dense scales, rather rough beneath, terminal joint as long as second, moderately stout, strongly reflexed. Thorax smooth. Forewings somewhat oblong, broad, apex obtuse-angled, hindmargin straight, not oblique. Hindwings distinctly narrower than forewings, oblong-ovate, hindmargin slightly indented beneath apex, cilia $\frac{1}{3}$. Abdomen broadly dilated, somewhat flattened, strongly margined. Posterior tibiæ clothed with short rough hairs. Forewings with 11 separate veins (normal veins 7 and 8 being coincident), 7 to costa, 2 from before angle of cell. Hindwings normal.

This genus and *Allodoxa* are distinguished from all the rest of the family by the peculiarity of having only 11 veins in the forewings, and in each case the change has been brought about by the coincidence of the normal veins 7 and 8, but they are not specially allied in other respects, and there can be little doubt that the variation has arisen independently in each instance, and is no indication of affinity. There is no difficulty in locating these genera by their other points of structure. *Atelosticha* is undoubtedly a direct development of *Hoplitica*, from which it only differs by this peculiarity of venation.

53. *Atel. phædrella*, n. sp.

Parva, capite niveo, alis ant. saturate ochreo-flavis, ad costam postice griseo-suffusis, costa nivea. puncto disci postico nigro ; post. griseis.

♂ ♀. 12½–14 mm. Head and palpi snow-white, basal half of second joint externally reddish-ochreous. Antennæ white. Thorax deep yellow, posteriorly lighter. Abdomen whitish-ochreous. Legs white, anterior and middle tibiæ and tarsi yellowish-brown above, posterior tibiæ and tarsi yellowish-tinged. Forewings rather broad, costa moderately arched, apex obtuse-angled, hindmargin straight, not oblique ; deep yellow, deepest towards base of costa, greyish-tinged towards costa posteriorly ; costal edge very narrowly snow-white almost from base to near apex, less distinct posteriorly ; a fuscous dot in disc before middle, often obsolete ; a more conspicuous dark fuscous dot in disc beyond middle: cilia yellow, becoming whitish towards extremities. Hindwings grey, darker grey in female, towards base somewhat lighter and yellowish-tinged ; cilia grey.

A very distinct and pretty species.

Not uncommon at Sydney and Newcastle, in November, and from January to March, seeming to frequent *Kunzea*.

12. NYMPHOSTOLA, *n. g.*

Head loosely haired, sidetufts large, dilated posteriorly ; in male an expansible pencil of long hairs on side of face beneath eye. Antennæ in male stout, somewhat serrate, very shortly ciliated (⅓), basal joint rather stout, without pecten. Palpi moderately long, second joint reaching base of antennæ, clothed with dense rather loose scales, with a short projecting triangular tuft of scales beneath towards apex, terminal joint as long as second, stout, strongly reflexed. Thorax smooth. Forewings somewhat oblong, broad, apex obtusely rounded, hindmargin evenly rounded, cilia ⅙. Abdomen moderate. Middle tibiæ

roughly haired beneath; posterior tibiæ clothed with rather short rough hairs. Forewings with vein 7 to apex, 2 from distinctly before angle of cell. Hindwings with vein 5 bent and approximated to 4 at base.

This and the following genus are closely allied, and are both restricted to New Zealand, where there can be no doubt that both have developed from a common ancestor, which must itself have been very nearly allied to *Hoplitica*, of which both genera preserve the exact neuration and other essential characters; both differ from *Hoplitica* and its allies in the very short ciliations of the antennæ, and *Nymphostola* also in the loose tuft of the palpi, as well as other minor characters. The cilia of the hindwings are unusually short, and the abdomen is not dilated.

54. *Nymph. galactina*, Feld.

(*Cryptolechia yalactina*, Feld., Reis. Nov. Pl. cxl., 34.)

Media, alis ant. niveis, puncto disci postico nigro, venis omnibus punctis minimis griseis notatis; post. niveis.

Conspicuously distinct by its white colour; when fresh, faintly tinged with greenish.

Hamilton and Dunedin, New Zealand, in January; rather common.

13. Proteodes, *n. g.*

Head with appressed scales, sidetufts large, spreading. Antennæ in male moderate, somewhat serrate towards apex, very shortly ciliated ($\frac{1}{3}$), basal joint moderate, without pecten. Palpi moderately long, second joint reaching base of antennæ, thickened with appressed scales, rather rough beneath, terminal joint much shorter than second, rather stout, slightly rough anteriorly. Thorax smooth. Forewings somewhat oblong, moderately broad, apex obtusely rounded, hindmargin not oblique. Hindwings as broad as forewings, ovate, rounded, cilia $\frac{1}{3}$. Abdomen moderate.

Posterior tibiæ clothed with rather short rough hairs. Forewings with vein 7 to apex, 2 from before angle of cell. Hindwings with vein 5 bent and approximated to 4 at base.

Nearly allied to *Nymphostola*, from which it is distinguished by the structure of the palpi, of which the second joint is untufted, and the terminal joint considerably shorter than the second.

55. *Prot. carnifex*, Butl.

(*Cryptolechia carnifex*, Butl., Proc. Zool. Soc. Lond. 1877, 406; *Cryptolechia rufosparsa*, ibid. 406.)

Media, alis ant. griseo-ochreis vel flavis, interdum ferrugineis, costa ferruginea, linea perobliqua punctoque disci obscuris griseis, venis omnibus punctis crebris griseis notatis; post. albis, apice leviter griseo.

Very variable in colouring and intensity.

Christchurch and Mount Hutt, New Zealand, in March and April; a common autumnal species.

14. Hoplitica, *n. g.*

Head with appressed scales, sidetufts moderately large, closely appressed. Antennæ in male moderately stout, moderately and evenly ciliated (1), basal joint rather stout, without pecten or with two or three fugitive hair-scales. Palpi rather long, second joint exceeding base of antennæ, thickened with appressed scales, terminal joint hardly shorter than second, rather stout, strongly recurved. Thorax smooth. Forewings somewhat oblong, moderately broad, apex obtusely or acutely angled, hindmargin perpendicular or oblique. Hindwings somewhat narrower than forewings, oblong-ovate, hindmargin sinuate beneath apex, cilia $\frac{1}{3}$. Abdomen broadly dilated, somewhat flattened, strongly margined. Middle tibiæ with dense loose hairs; posterior tibiæ clothed with rather short loose hairs. Forewings with vein 7 to

apex, 2 from rather before angle of cell, fork of 1 strongly dilated. Hindwings with vein 5 bent and strongly approximated to 4 at base.

Differs from *Eulechria* (to which it is not in fact immediately related) through the absence of a complete basal pecten of antennæ, the dilated abdomen, and the approximation of veins 4 and 5 of the hindwings at base. It must be considered as developed directly from *Heliocausta* through *Euryplaca*, its relationship with *Eulechria* being merely collateral. The genus is of some extent, and has given rise to several offshoots, which have been already discussed.

The perfect insects are inactive, and seem attached to species of *Eucalyptus*. I have thirteen species, some of which are closely allied; the following is a tabulation of them:

A. Forewings ochreous-rosy or reddish-ochreous.
  1. With two or three transverse strigæ.
    a. With two inwardly oblique cloudy fasciæ 65. *rufa*.
    b. Without inwardly oblique fasciæ ... 64. *costimacula*.
  2. With a series of dots only.
    a. Apex of hindwings rosy ... . 62. *pudica*.
    b. Apex of hindwings grey. ... ... 63. *leucerythra*.

B. Forewings greyish-pink or pinkish-grey.
  1. Without transverse lines ... ... 59. *sericata*.
  2. With transverse lines.
    a. Forewings broad.
      i. Hindwings towards base whitish ... 60. *carnea*.
      ii. Hindwings towards base ochreous ... 61. *repandula*.
    b. Forewings elongate.
      i. Hindwings dark grey, ochreous-tinged... 66. *absumptella*.
      ii. Hindwings rather light grey ... ... 67. *coenosa*.
      iii. Hindwings whitish towards base, apex grey ... ... 68. *cholodella*.

C. Forewings pure grey.
  1. Whitish-grey, posterior line separated into minute scales ... ... 58. *myodes.*
  2. Grey, posterior line forming distinct dots... 57. *sobriella.*
D. Forewings whitish-ochreous ... ... 56. *neochlora.*

56. *Hopl. neochlora*, n. sp.

Parva, alis ant. albido-ochreis, punctis disci quattuor serieque punctorum marginis postici nigris ; post. griseis.

♂. $13\frac{1}{2}$ mm. Head and thorax whitish-ochreous. Palpi whitish, with a dark fuscous band before apex of second joint, terminal joint ochreous-tinged. Antennæ grey. Abdomen whitish-grey (?). Anterior tibiæ dark fuscous, apex and two bands white, beneath white, tarsi dark fuscous, two basal joints with apical white rings ; middle tibiæ and tarsi whitish-ochreous mixed with grey ; posterior tibiæ and tarsi whitish. Forewings moderately broad, hardly dilated, costa moderately arched, apex obtuse, hindmargin rather oblique ; whitish-ochreous ; a black dot at base of costa ; a conspicuous black dot in disc before middle, a second in disc beyond middle, a third on fold beyond first, and a fourth below and rather beyond second ; a row of black dots on hindmargin : cilia whitish-ochreous. Hindwings grey, cilia whithish-grey.

Allied to the two following species, but distinguished from all by the whitish-ochreous colour and small size.

One specimen sent by Mr. G. Barnard from Coomooboolaroo, near Duaringa, Queensland.

57. *Hopl. sobriella*, Walk.

(*Depressaria sobriella*, Walk., Brit. Mus. Cat. 565.)

Minor, alis ant. griseis, punctis disci quattuor, serie punctorum postica partim obsoleta alteraque marginis postici nigris ; post. saturate griseis.

♂ ♀. 15–18 mm. Head and thorax grey. Palpi whitish, second joint with a narrow oblique dark fuscous band above middle, extreme base of terminal joint dark fuscous. Antennæ light grey, obsoletely annulated with darker. Abdomen whitish-ochreous-grey. Anterior tibiæ black, beneath white, tarsi black with whitish rings at apex of two basal joints; middle tibiæ ochreous-grey, tarsi dark grey with ochreous-whitish rings at apex of joints; posterior tibiæ and tarsi ochreous-whitish. Forewings moderately broad, rather dilated posteriorly, costa moderately strongly arched, apex obtuse-angled, hindmargin straight, slightly oblique; uniform grey, rather glossy; extreme edge very slenderly ochreous-whitish; a black dot at base of costa; a black dot in disc before middle, a second in disc beyond middle, a third obliquely beyond first on fold, and a fourth obliquely beyond and below second, all generally conspicuous; sometimes a fifth smaller obsolete dot between and rather beyond second and fourth; an outwardly curved row of incomplete black dots from disc above middle at $\frac{4}{5}$ to slightly before anal angle, lower portion more or less obsolete; a row of conspicuous black dots along hindmargin and apical fifth of costa: cilia whitish-grey. Hindwings grey, rather darker posteriorly; cilia whitish-grey, with an indistinct darker line near base.

This and the following species are very closely allied; *H. sobriella* is considerably smaller and darker, the band of the palpi narrower, the black dots more conspicuous, and the posterior line composed of tolerably distinct moderate-sized dots, wholly obsolete towards costa and partially towards inner margin.

Not uncommon round Sydney in January and February, and at Toowoomba, Queensland, in September.

58. *Hopl. myodes*, n. sp.

Media, alis ant. albido-griseis, puncto ad dorsi basim, aliis disci quattuor serieque marginis postici nigris, linea squamarum postica tenui angulata grisea; post. saturate griseis.

♂. 22-24½ mm. Head and thorax whitish-grey, slightly ochreous-tinged. Palpi whitish, second joint with a blackish median band, base of terminal joint blackish. Antennæ grey. Abdomen whitish-grey. Anterior tibiæ dark fuscous mixed with ochreous, tarsi dark fuscous, two basal joints with whitish apical rings ; middle tibiæ greyish-ochreous, tarsi dark grey with whitish rings at apex of joints ; posterior tibiæ and tarsi ochreous-whitish. Forewings moderately broad, somewhat dilated posteriorly, costa moderately strongly arched, apex obtuse, hindmargin rather oblique ; uniform whitish-grey, faintly ochreous-tinged ; costal edge whitish ; a minute black dot at base of costa ; a black dot on inner margin near base, and sometimes one or two others in disc towards base ; a black dot in disc before middle, a second in disc beyond middle, a third on fold obliquely beyond first, and a fourth, minute or obsolete, below and beyond second ; a very fine transverse row of dark grey scales, not forming distinct dots, from middle of costa to inner margin before anal angle, irregularly sinuate on upper half and strongly angulated in middle ; a row of conspicuous black dots on hindmargin and apical fifth of costa : cilia ochreous-grey-whitish. Hindwings grey, darker towards apex ; cilia whitish-grey, with a suffused dark grey line near base.

Very near the preceding, but larger and lighter, the band of palpi broader, a distinct blackish dot near base of inner margin, which is not found in *H. sobriella*, the discal dots less distinct, the posterior line composed of numerous minute scales arranged in a fine line and not collected into dots, distinct throughout. The species also has considerable superficial resemblance with *Eul. griseola*, but may be immediately distinguished by the dark band of the palpi.

Two specimens taken at Murrurundi, New South Wales, in November.

59. *Hopl. sericata*, n. sp.

Minor, alis ant. griseo-carneis, sericeis, punctis disci tribus saturate griseis ; post. griseis.

♀. 16½ mm. Head grey-whitish, above pinkish-tinged. Palpi whitish, pinkish-tinged, terminal joint and apex of second anteriorly grey. Antennæ ochreous-whitish, annulated with dark fuscous. Thorax pinkish-grey. Abdomen ochreous-whitish, segments suffused with ochreous-grey except on margins. Anterior tibiæ and tarsi dark grey, reddish-tinged, apex of tarsal joints with whitish rings; (middle legs broken;) posterior legs ochreous-whitish. Forewings moderately broad, rather dilated, costa moderately arched, apex obtuse, hindmargin almost straight, slightly oblique; glossy pinkish-grey; costa narrowly dull pink, tips of scales whitish; a dark fuscous dot in disc before middle, a second in disc beyond middle, and a third obliquely beyond first on fold; cilia whitish, towards base pinkish-tinged. Hindwings grey, slightly ochreous-tinged, lighter towards base; cilia whitish-grey, with an indistinct grey line near base.

Distinguished from all the other pinkish-grey species by the total absence of the posterior and other transverse lines, which are distinct in all of them; in its glossy appearance it resembles *H. cholodella*, but is smaller.

One specimen taken near Sydney in December, and a second at Brisbane in September.

60. *Hopl. carnea*, Z.

(*Cryptolechia carnea*, Z., Linn. Ent. X,, 148.)

Media, alis ant. carneo-griseis, punctis disci tribus, serie punctorum postica angulata alteraque marginis postici saturate griseis; post. griseis, basim versus albidis.

♂ ♀. Head and thorax pinkish-grey, face whitish. Palpi grey, second joint whitish towards base, terminal joint whitish posteriorly. Antennæ whitish-grey. Abdomen whitish-grey, anal tuft ochreous-tinged. Anterior tibiæ and tarsi dark fuscous, tarsi with obscure whitish rings at apex of two basal joints; middle tibiæ whitish, slightly reddish-tinged, tarsi dark grey with

whitish rings at apex of joints ; posterior tibiæ and tarsi whitish. Forewings moderately broad, rather dilated posteriorly, costa moderately arched, more strongly at base, apex obtuse, hindmargin straight or faintly sinuate, slightly oblique ; light pinkish-grey ; costal edge pale pinkish, tips of scales whitish ; a dark grey dot in disc before middle, a rather larger and sometimes partially double one in disc beyond middle, and a third obliquely beyond first on fold ; an irregular often obsolete, twice strongly dentate, ill-defined dark grey transverse line from $\frac{1}{3}$ of costa to middle of inner margin ; between this line and base is sometimes another similar line ; a well-defined transverse row of dark grey crescentic dots from middle of costa very obliquely outwards to disc at $\frac{5}{6}$ from base, thence sharply bent and nearly parallel to hindmargin, ending on inner margin before anal angle ; a row of well-defined dark grey dots along hindmargin and apical third of costa : cilia pale pinkish-grey, towards tips whitish. Hindwings grey, becoming whitish towards base ; cilia whitish-grey, with a faint darker line near base.

Closely allied to *H. repandula*, from which it is best distinguished by the hindwings, which are whitish towards base, without any ochreous tinge ; it is also duller and less mottled in appearance, and the antennæ are not distinctly annulated.

Common round Sydney and Mittagong, New South Wales, in March, beaten from *Eucalyptus ;* also received from the neighbourhood of Duaringa, Queensland.

61. *Hopl. repandula*, Z.

(*Cryptolechia repandula*, Z., Linn. Ent. X., 150, fig. 3.)

Media, alis ant. griseo-carneis, punctis disci tribus, serie punctorum postica angulata alteraque marginis postici saturate griseis ; post. griseis, basim versus albido-ochreis.

♂ ♀. 22–25 mm. Head and thorax fuscous-grey, pinkish-tinged, face whitish. Palpi grey, slightly pinkish externally,

second joint whitish towards base, terminal joint whitish posteriorly. Antennæ ochreous-whitish, sharply annulated above with dark fuscous. Abdomen whitish-ochreous. Anterior tibiæ and tarsi rather light reddish-fuscous, tarsal joints obscurely whitish at apex, dark grey at base; middle and posterior legs ochreous-whitish, middle tarsi grey with whitish rings at apex of joints; femora white beneath. Forewings moderately broad, rather dilated posteriorly, costa moderately arched, more strongly at base, apex obtuse, hindmargin straight or faintly sinuate, hardly oblique; light pinkish-grey, somewhat ochreous-tinged; costal edge pale pinkish, tips of scales whitish; a dark grey dot in disc before middle, a distinctly double one in disc beyond middle, and a third obliquely beyond first on fold; a very irregularly dentate ill-defined cloudy dark grey transverse line from $\frac{1}{3}$ of costa to middle of inner margin, a second between this and base, and a third more obsolete near base, all sometimes partially obsolete; a tolerably well-defined transverse row of dark grey crescentic marks, almost connected, from middle of costa very obliquely outwards to disc at $\frac{5}{6}$, thence sharply bent and nearly parallel to hindmargin, ending on inner margin before anal angle; a row of cloudy dark grey dots along hindmargin and apical third of costa: cilia pinkish mixed with whitish-grey, towards tips whitish. Hindwings ochreous-grey, darker grey posteriorly, becoming whitish-grey-ochreous towards base; cilia whitish-grey, towards anal angle whitish-ochreous.

Very near the preceding, yet easily separated by the distinct ochreous suffusion of the hindwings, the brighter forewings with more distinct transverse lines, and the antennæ sharply annulated.

Rather common round Melbourne, and on the Mount Lofty Range, South Australia; also once taken near Sydney in November.

62. *Hopl. pudica*, Z.

(*Cryptolechia pudica*, Z , Linn. Ent. X., 152.)

Media, alis ant. ochreo-carneis, punctis disci duobus anticis, tertio postico majusculo glauco-mixto, serieque punctorum postica angulata saturate griseis; post. albidis, apicem versus roseo-suffusis.

♂. 21–25 mm. Head and thorax pinkish-ochreous, face lighter, whitish beneath. Palpi carmine-pink, second joint towards base whitish, terminal joint posteriorly whitish. Antennæ whitish-grey, near base suffused with rosy. Abdomen ochreous-whitish, anal tuft more ochreous. Anterior tibiæ and tarsi carmine-pink; middle tibiæ rosy-whitish, tarsi carmine-pink with obscure whitish rings at apex of joints; posterior tibiæ and tarsi whitish. Forewings moderately broad, rather dilated posteriorly, costa moderately arched, more strongly towards base, apex obtuse, hindmargin almost straight, hardly oblique; light pinkish-ochreous sometimes strongly pinkish-tinged; costa narrowly carmine-pink, extreme tips of scales whitish; a dark fuscous dot in disc before middle, and another very obliquely beyond it on fold; a small round dark fuscous spot in disc beyond middle, variable in size, its centre suffused with whitish-blue scales; a tolerably distinct transverse row of dark fuscous somewhat crescentic dots, from middle of costa very obliquely outwards to disc at $\frac{5}{6}$, thence sharply bent and nearly parallel to hindmargin, ending on inner margin before anal angle, sometimes partially obsolete; cilia pink, towards tips white. Hindwings whitish, towards apex and hindmargin rather strongly rosy-suffused; cilia whitish.

A beautiful species, differing from all in the rosy suffusion of the hindwings, and the enlargement of the posterior discal dot.

Not uncommon and widely distributed; taken near Sydney, Brisbane, and on the Mount Lofty Range, South Australia, in November and from January to March.

63. *Hopl. leucerythra*, n. sp.

Media, alis ant. ochreo-carneis, punctis disci tribus serieque punctorum postica obscura angulata saturate griseis; post. albidis, apicem versus leviter griseo-suffusis.

♂ ♀. $18\frac{1}{2}$–21 mm. Head and thorax pinkish-ochreous, face whitish. Palpi dull fuscous-carmine, second joint whitish internally and towards base, terminal joint whitish posteriorly. Antennæ grey, suffused with carmine towards base. Abdomen whitish-grey, slightly ochreous-tinged. Anterior tibiæ and tarsi carmine, four apical tarsal joints partially suffused with blackish; middle tibiæ rosy-whitish, tarsi grey, basal joint and apical rings of other joints whitish; posterior tibiæ and tarsi whitish. Forewings moderately broad, somewhat dilated posteriorly, costa moderately arched, rather more strongly at base, apex obtuse, hindmargin almost straight, oblique; pale pinkish-ochreous, sometimes rather strongly pinkish; costa narrowly carmine-pink, tips of scales whitish; a dark fuscous dot in disc before middle, a second, slightly larger, in disc beyond middle, and a third obliquely beyond first on fold; sometimes a short obsolete oblique row of three grey dots from costa at $\frac{2}{5}$, and occasionally two or three ether scattered dark scales towards base; an ill-defined, often almost obsolete, transverse row of irregnlar dark fuscous dots, from middle of costa very obliquely outwards te disc at $\frac{5}{6}$, thence sharply bent and nearly parallel to hindmargin, ending on inner margin before anal angle; cilia pink, towards tips whitish. Hindwings whitish, posteriorly faintly tinged with ochreous-grey; cilia whitish, round apex greyish-tinged.

Nearly allied to *H. pudica*, but smaller and slightly duller, the posterior discal dot not notably enlarged, and the hindwings posteriorly tinged with greyish instead of rosy.

Common at Sydney and Mittagong (2,000 feet), New South Wales, and at Launceston, Tasmania, in December, January, March, and April.

64. *Hopl. costimacula*, n. sp.

Media, alis ant. saturate ochreo-carneis, punctis disci tribus serieque punctorum marginis postici nigris, strigis tribus

transversis dentatis maculaque marginis postici saturate griseis ; post. griseis, basim versus albido-ochreis.

♂ ♀. 18–21 mm. Head and thorax light reddish-ochreous brown, face light ochreous. Palpi light rosy-ochreous, second joint internally whitish towards base. Antennæ whitish-ochreous, sharply annulated with dark fuscous, towards base rosy-tinged. Abdomen whitish-ochreous, above partially greyish-suffused. Anterior tibiæ and tarsi ochreous-carmine, apex of tarsal joints ochreous ; middle and posterior legs whitish-ochreous, middle pair partially rosy-tinged ; femora clear white beneath. Forewings moderately broad, somewhat dilated posteriorly, costa gently arched, rather more strongly at base, apex obtuse, hindmargin hardly oblique, slightly rounded ; ochreous-carmine-pink, strewn with whitish-ochreous scales ; costa narrowly deeper pink, tips of scales whitish-ochreous ; a dark fuscous dot in disc before middle, a second, rather larger and sometimes distinctly double, in disc beyond middle, and a third obliquely beyond first on fold ; a very irregular cloudy grey transverse line close to base, darker on costa ; a distinct cloudy strongly and irregularly dentate transverse grey line from $\frac{1}{5}$ of costa to $\frac{1}{4}$ of inner margin, and another more strongly dentate from $\frac{2}{5}$ of costa to middle of inner margin, both forming small dark grey spots on costa ; a slenderer and more distinct dark grey sinuate or dentate line from $\frac{3}{5}$ of costa obliquely outwards, thence curved strongly round to inner margin before anal angle, thickened and darker near costa ; a cloudy grey shade from $\frac{4}{5}$ of costa to inner margin before anal angle, considerably broader towards costa ; a small cloudy grey spot towards middle of hindmargin ; a row of distinct dark grey dots along hindmargin and apical fourth of costa, cilia light carmine-pink, towards tips whitish-ochreous. Hindwings ochreous-grey, costa and base more whitish-ochreous ; cilia whitish-ochreous grey, with a distinct grey line near base.

Deeper-coloured than the preceding, and readily known by the several transverse strigæ forming dark spots on costa.

Common round Sydney and Brisbane, in September, October, January, and February.

65. *Hopl. rufa*, n. sp.

Minor, alis ant. ochreo-rufis, strigis duabus rectis parallelis obscuris lineaque postica curva dentata saturate griseis; post. griseis, basim versus albido-ochreis.

♂. 15–18 mm. Head reddish-ochreous-brown, face pale ochreous. Palpi light fuscous-reddish, externally mixed with dark fuscous, second joint ochreous-whitish towards base. Antennæ light ochreous, annulated with dark fuscous, towards base reddish-tinged. Thorax reddish-ochreous-brown, suffused on back with dark fuscous. Abdomen whitish-ochreous, segments suffused with grey except on margins. Legs whitish-ochreous, anterior tibiæ and tarsi suffused with pinkish above, middle tarsi greyish towards base of joints. Forewings moderate, slightly dilated, costa gently arched, apex obtuse, hindmargin rounded, oblique; deep reddish-ochreous, or reddish-ochreous-brown, with scattered lighter ochreous scales; costa very narrowly carmine-pink, tips of scales ochreous-whitish; discal dots obsolete; some blackish-grey scales at base; a small blackish-grey spot on costa before middle, tending to form a connected streak with a smaller cloudy blackish-grey spot in disc at $\frac{1}{4}$ from base, and another on fold somewhat nearer base; an elongate cloudy blackish-grey blotch along inner margin from $\frac{1}{3}$ to $\frac{3}{4}$; a blackish-grey cloudy streak from $\frac{1}{3}$ of costa to $\frac{2}{3}$ of inner margin, dilated on costa into a small spot, whence proceeds a transverse slightly curved row of indistinct blackish-grey dots to inner margin before anal angle; a row of indistinct dark grey dots along hindmargin and apical fifth of costa: cilia reddish-ochreous, towards tips ochreous-whitish. Hindwings ochreous-grey, costa and base more whitish-ochreous: cilia whitish-ochreous-grey, with a faint grey line near base.

Allied to *H. costimacula*, of which I once fancied it might prove an abnormal variety, though the markings are very different; but the wings are distinctly narrower and less dilated, and the ground colour much browner, so that it is probably a perfectly good species.

Two specimens taken near Sydney in December.

66. *Hopl. absumptella*, Walk.

(*Depressaria absumptella*, Walk., Brit. Mus. Cat. 567.)

Minor, alis ant. griseo-carneis, punctis disci tribus, strigis tribus transversis dentatis serieque punctorum marginis postici saturate griseis; post. saturate ochreo-griseis,

♂ ♀. 15–20 mm. Head and thorax whitish-grey, slightly ochreous-tinged, mixed with dark fuscous, face whitish-ochreous. Palpi ochreous-whitish, terminal joint and apex of second anteriorly suffused with dark grey. Antennæ ochreous-whitish, sharply annulated with dark fuscous. Abdomen whitish-ochreous, segments ochreous-brown except on margins. Anterior tibiæ and tarsi carmine-pink mixed with dark grey, tarsal joints with ochreous-whitish apical rings; middle tibiæ ochreous, tarsi grey with whitish rings at apex of joints; posterior legs whitish-ochreous, tarsal joints faintly grey towards base: femora white beneath. Forewings moderate, somewhat dilated posteriorly, costa slightly arched, apex obtuse, hindmargin rounded, oblique; purple-fuscous thickly overlaid with grey-whitish scales; costal edge very narrowly carmine-pink, tips of scales whitish; a dark grey dot in disc before middle, a second in disc beyond middle, and a third obliquely beyond first on fold; three rather oblique tolerably well-defined dark grey lines, very strongly and irregularly dentate, crossing wing near base, at $\frac{1}{4}$, and about middle, generally thickened on costa and inner margin, sometimes by partial obsolescence and confluence appearing to take different and more oblique directions; a distinct slender, sometimes interrupted,

dentate dark grey line from $\frac{3}{5}$ of costa obliquely outwards to disc, thence sharply bent and continued inwards to inner margin before anal angle, often considerably thickened on costa ; a small cloudy grey spot below second discal dot, sometimes connected with costa at $\frac{3}{5}$ by a cloudy fuscous-grey streak ; sometimes these markings are suffused with reddish-fuscous ; a row of distinct dark grey dots along hindmargin and apical fourth of costa : cilia whitish-grey, with a distinct central carmine-pink line, sometimes basally suffused with pinkish. Hindwings dark grey, ochreous-tinged, especially towards base, costa whitish-ochreous ; cilia grey, with a dark grey line near base.

Var. *a.*—Markings of forewings all obsolete, except discal dots, a small dark grey spot on inner margin before middle, and a larger blackish-grey spot on inner margin beyond middle.

This and the two following species have the forewings more oblong and less dilated than the preceding group, and are duller in colouring. *H. absumptella* differs from the other two by the smaller size, more numerous transverse strigae, and darker hindwings. One variety described above is clearly an abnormal form of this species, in which the dark pigment seems to have been withdrawn from most of the wing to concentrate itself in one place ; I have only a single specimen of it, taken in company with the usual form.

Common round Sydney, especially at rest on fences ; also taken in the Shoalhaven district, New South Wales, at Launceston, Tasmania, and near Melbourne and Brisbane, from September to January.

67. *Hopl. coenosa*, n. sp.

Media, alis. ant. carneo-griseis, punctis disci tribus, strigis duabus transversis dentatis serieque punctorum marginis postici saturate griseis ; post. griseis.

♀. 22 mm. Head grey-whitish, mixed on crown with dark ochreous-fuscous. Palpi whitish, suffused with pinkish except

towards base, terminal joint and apex of second anteriorly grey. Antennæ grey. Thorax dark ochreous-fuscous, mixed with grey-whitish. Abdomen whitish-ochreous, segments ochreous-fuscous except on margins. Anterior tibiæ and tarsi dark fuscous, pinkish-tinged, apex of tarsal joints rosy-whitish; middle tibiæ ochreous-whitish mixed with grey, tarsi greyish with whitish rings at apex of joints; posterior legs ochreous-whitish; femora white beneath. Forewings moderate, somewhat dilated posteriorly, costa moderately arched, apex obtuse, hindmargin rather oblique, slightly rounded; pinkish-fuscous, thickly overlaid with grey-whitish scales, appearing pinkish-grey; costal edge more pinkish-tinged, tips of scales whitish; an ill-defined dark grey dot in disc before middle, a second in disc beyond middle, and a third obliquely beyond first on fold; an indistinct cloudy dark grey very strongly and irregularly dentate transverse line from costa before middle to inner margin before middle, rather dilated on margins, passing through the two anterior dots; an indistinct cloudy grey spot below second dot; a more distinct irregular partially interrupted dark grey transverse line from $\frac{3}{5}$ of costa obliquely outwards, rectangularly bent in disc, and continued to inner margin before anal angle; a row of tolerably well-defined dark grey dots along hindmargin and apical fourth of costa; cilia grey-whitish, with a faint pinkish-grey central line. Hindwings grey, faintly ochreous-tinged; cilia grey, with a darker line nearer base.

Nearly allied to the preceding, but larger, with only two transverse strigae, the hindwings lighter, and the antennæ not annulated.

Two specimens taken at Blackheath in the Blue Mountains (3500 feet) in March.

68. *Hopl. cholodella*, n. sp,

Media, alis ant. carneo-griseis, sericeis, punctis disci tribus nigris, striga postica angulata serieque punctorum marginis

postici obscuris saturatioribus; post. griseo-albidis, apice griseo.

♂. 18–20 mm. Head and thorax ochreous-brown, face mixed with whitish-ochreous. Palpi fuscous-grey, towards base and posteriorly whitish. Antennæ whitish, sharply annulated with dark fuscous. Abdomen grey-whitish. Anterior tibiæ and tarsi dark fuscous, apex of tarsal joints obscurely whitish; middle tibiæ dark fuscous, beneath white, tarsi dark fuscous with whitish rings at apex of joints; posterior legs whitish. Forewings moderate, somewhat dilated posteriorly, costa moderately arched, apex obtuse, hindmargin oblique, rounded; glossy fuscous, almost wholly overlaid with whitish-ochreous-grey scales, faintly pinkish-tinged; costal edge purple-fuscous, tips of scales whitish; a dark fuscous dot in disc before middle, a second, larger and indistinctly double, in disc beyond middle, and a third rather obliquely beyond first on fold; the purple-fuscous ground colour forms a small spot on costa before $\frac{3}{4}$, its apex tending to be connected with the second discal dot, and also giving rise to an obsolete sinuous-dentate transverse line proceeding obliquely outwards, sharply bent in disc, and continued to inner margin before anal angle, most distinct in disc; a row of purple-fuscous dots along hindmargin and apical fourth of costa; cilia whitish-grey, towards base faintly pinkish-tinged. Hindwings whitish-grey, darker posteriorly; cilia whitish-grey, with a darker line near base.

Characterised by its uniform glossy appearance, the single posterior striga not separated into dots, and the whitish-grey hindwings.

Two specimens taken at Blackheath in November.

15. Eulechria, *n. g.*

Head loosely scaled, sidetufts large, meeting, loose, somewhat projecting between antennæ. Antennæ in male moderate, evenly

and moderately or rather strongly ciliated (1 to 2), basal joint moderate, with strong pecten. Palpi moderate, or rather long, second joint hardly reaching or rarely somewhat exceeding base of antennæ, thickened with appressed scales, somewhat loose or slightly rough beneath, terminal joint somewhat shorter than second, moderate, recurved. Thorax smooth. Forewings elongate, moderate, apex rounded more or less strongly, hindmargin obliquely rounded. Hindwings slightly narrower than forewings, elongate-ovate, hindmargin rounded, cilia $\frac{1}{2}$ to 1. Abdomen moderate, generally strongly margined. Posterior tibiæ clothed with long hairs above. Forewings with vein 7 to apex, 2 from or close before angle of cell. Hindwings normal.

An extensive genus, forming the type of one of the principal groups of the family, essentially characterised by the termination of vein 7 in the apex, and the strong basal pecten of the antennæ. None of the genera hitherto given belong to this branch, but a number of the small genera, which immediately succeed, are attached to it. *Eulechria* must be regarded as originating from *Phloeopola ;* that is, the species of the latter present the nearest approach amongst known genera to the ancestral form of *Eulechria* which genus differs from *Phloeopola* especially by the absence of the thoracic crest.

Although some of the species are abundant, I have not met with any of the larvæ. I have described here thirty-seven Australian species, and two from New Zealand. The following is the best tabulation which I can contrive; but the species are in general so obscurely coloured and deficient in special characteristics, that a clear analysis is quite impracticable; the principal defect in this is that the character by which the genus is divided into two main groups, viz. the form of the posterior line, although a natural distinction, is sometimes hard to observe accurately from the obsolescence of the line itself.

1*a*. Forewings white with two dark fasciæ.

2*a*. Fasciæ dark fuscous ... ... 82. *triferella*.
2*b*. Fasciæ ochreous-brown.
3*a*. Hindwings grey ... ... 84. *epicausta*.
3*b*. Hindwings whitish-grey ... ... 83. *brachypepla*.
1*b*. Forewings not white, or if so, without two fasciæ.
2*a*. Posterior line not angulated beneath costa, leaving costa near middle; usually three discal dots.
3*a*. Forewings narrow, blackish ... ...107. *perdita*.
3*b*. Forewings moderate, ochreous, fuscous, or grey.
4*a*. With a longitudinal interrupted blackish median streak ... ...103. *zylopterella*.
4b. Without median blackish streak.
5*a*. With a short black subcostal strigula at base.
6*a*. Discal strigulæ thick, irregular ... ...105. *grammatica*.
6*b*. Discal strigulæ slender, uniform... ...106. *scopariella*.
5*b*. Without black subcostal strigula.
6*a*. Hindwings dark grey ... ... 72. *zophoëssa*.
6*b*. Hindwings grey or whitish-grey.
7*a*. With a black transverse fascia near base. 74. *episema*.
7*b*. With a dark fuscous rather oblique dorsal streak near base ... ... 70. *nephelopa*.
7*c*. Without basal markings.
8*a*. Head whitish-ochreous.
9*a*. Posterior line running to middle of inner margin ... ... 73. *melesella*.
9*b*. Posterior line to before anal angle.
10*a*. Cilia of forewings whitish-ochreous ... 78. *pantelella*.
10*b*. Cilia of forewings whitish-fuscous ... 75. *convictella*.
8*b*. Head whitish.
9*a*. Forewings rosy-tinged ... ... 80. *puellaris*.

9*b*. Forewings not rosy.
10*a*. Shoulders blackish ... ... 76. *exanimis*.
10*b*. Shoulders ochreous-brown ... ... 77. *pallidella*.
8*c*. Head grey or whitish-grey.
9*a*. Forewings whitish-ochreous, sometimes rosy or greyish-tinged ... ... 81. *achalinella*.
9*b*. Forewings grey.
10*a*. Forewings uniform ... ... 79. *leptobela*.
10*b*. Forewings irrorated with blackish or dark grey.
11*a*. Forewings elongate ... . 104. *siccella*.
11*b*. Forewings dilated.
12*a*. Forewings pale grey, slightly ochreous-tinged ... ... 69. *griseola*.
12*b*. Forewings rather dark grey ... ... 71. *cremnodes*.
2*b*. Posterior line sharply angulated beneath costa, leaving costa near apex; usually five discal dots.
3*a*. Hindwings yellow.
4*a*. Hindwings margined with dark fuscous. 93. *philotherma*.
4*b*. Hindwings not margined... ... ... 89. *leucopelta*.
3*b*. Hindwings not yellow.
4*a*. Forewings with ground colour white.
5*a*. With a black transverse fascia near base 86. *transversella*.
5*b*. Without basal fascia.
6*a*. Discal dots obscured ... ... 91. *habrophanes*.
6*b*. Discal dots clearly defined.
7*a*. Markings fuscous... ... ... 87. *variegata*.
7*b*. Markings grey ... ... 88. *hemiphanes*.
4*b*. Forewings with ground colour ochreous-yellow or whitish-ochreous.
5*a*. With a strong dark fuscous costal streak 90. *poecilella*.
5*b*. Without costal streak ... ... 85. *chlorella*.
4*c*. Forewings dull light pinkish ... ... 92. *lividella*.

4*d*. Forewings grey.
5*a*. Hindwings brownish-ochreous suffused with grey ... ... 94. *brontomorpha.*
5*b*. Hindwings dark fuscous... ... ...102. *cimmeriella.*
5*c*. Hindwings grey.
6*a*. Head white ... ... 95. *calotropha.*
6*b*. Head pale yellow ... ...101. *paurogramma.*
6*c*. Head grey or whitish-grey.
7*a*. Costa with two cloudy darker spots.
8*a*. First spot reaching to fold ... ... 96. *philostaura.*
8*b*. Both spots short ... ...100. *photinella.*
7*b*. Costa without spots.
8*a*. Forewings rather short, without white scales ... ... 97. *amaura.*
8*b*. Forewings elongate, generally with white scales.
9*a*. With a distinct longitudinal whitish streak; spots nearly obsolete .. .. 98. *dolosella.*
9*b*. Without distinct whitish streak; spots distinct ... ... 99. *adoxella.*

69. *Eul. griseola*, Z.

(*Cryptolechia griseola Z.*, Linn. Ent. X, 151.)

Media, alis ant. dilute griseis, fusco-sparsis, punctis disci tribus serieque punctorum postica angulata saturate fuscis; post. dilute griseis.

♂ ♀. 20–22 mm. Head and thorax ochreous-grey, face whitish-ochreous. Palpi grey-whitish. Antennæ whitish-grey. Abdomen ochreous-grey-whitish. Anterior and middle legs fuscous-grey, tarsal joints with ochreous-whitish apical rings; posterior legs ochreous-whitish. Forewings moderately broad, somewhat dilated, costa gently arched, more strongly at base, apex rounded, hindmargin obliquely rounded; whitish-grey, very

faintly ochreous-tinged, finely and irregularly sprinkled with dark grey; a dark grey dot in disc before middle, a second, rather larger and indistinctly double, in disc beyond middle, and a third rather obliquely beyond first on fold; a transverse row of dark grey somewhat crescentic dots, generally well-defined, from middle of costa very obliquely outwards to a little before hindmargin, thence bent sharply and continued, very near and almost parallel to hindmargin, to inner margin before anal angle; hindmarginal dots sometimes very faintly indicated; cilia whitish-grey, ochreous-tinged, towards tips whitish. Hindwings grey, rather lighter towards base; cilia whitish, with an obsolete grey line near base.

Broader-winged than the other grey species of the genus, and therefore seeming to approach *Hoplitica*, but the resemblance is due to analogy only; it is easily distinguished from the grey species of *Hoplitica* by the absence of the dark band of the palpi, and of the hindmarginal dots.

Common round Sydney and Melbourne, in January and March.

70. *Eul. nephelopa*, n. sp.

Media, alis ant. fusco-ochreis, strigula dorsi prope basim transversa, punctis disci tribus, serieque punctorum postica angulata nigris; post. dilute griseis.

♂. 19 mm. Head and thorax brownish-ochreous mixed with dark fuscous. Palpi dark fuscous, irrorated with whitish-ochreous. Abdomen bright ochreous, margins of segments ochreous-whitish. Anterior and middle legs dark fuscous, tarsi with whitish rings at apex of joints; posterior legs ochreous-whitish, tarsi somewhat mixed with fuscous. Forewings moderate, costa rather abruptly arched near base, thence slightly arched, apex rounded, hindmargin obliquely rounded; light brownish-ochreous, irrorated with fuscous towards costa and posteriorly; costal edge dark fuscous towards base; a short rather oblique transverse dark

fuscous streak from inner margin near base; a conspicuous blackish dot in disc before middle, a second in disc beyond middle, and a third smaller one on fold obliquely beyond first; an indistinct transverse series of cloudy dark fuscous dots from $\frac{2}{3}$ of costa obliquely outwards to near middle of hindmargin, thence bent inwards and continued, very near and parallel to hindmargin, to inner margin before anal angle; cilia whitish-ochreous, somewhat mixed with fuscous. Hindwings pale grey, apex somewhat darker; cilia grey-whitish.

Specially characterised by the abrupt basal arch of costa, the brownish-ochreous ground colour, and the oblique transverse streak from inner margin near base.

One specimen taken near Sydney in November.

71. *Eul. cremnodes*, n. sp.

Media, alis ant. saturatius griseis, nigro-conspersis, punctis disci tribus strigaque postica flexuosa nigris; post. griseis.

♂. 20 mm. Head grey. Palpi light grey, second joint externally mixed with blackish, terminal joint with a blackish anterior spot at base. Antennæ grey, annulated with dark fuscous. Thorax grey, irrorated with blackish. Abdomen grey. Anterior and middle legs dark fuscous-grey, tarsal joints with whitish apical rings; posterior legs grey-whitish. Forewings strongly dilated, costa arched towards apex, apex rounded, hindmargin obliquely rounded; grey, sprinkled with numerous small ill-defined spots of blackish scales; a somewhat larger and more distinct blackish spot in disc before middle, a second in disc beyond middle, and a third almost directly beneath first on fold; a cloudy ill-defined blackish transverse line from costa about $\frac{2}{3}$ very obliquely outwards, beneath apex sharply dentate inwardly, thence bent nearly parallel and very near to hindmargin, ending in an angle; beyond this line the veins are distinctly darker

than the groundcolour: cilia grey, towards base mixed with blackish, tips lighter. Hindwings grey, cilia light grey.

A distinct species, in form of wing closely approaching *E. melesella.*

One specimen taken at Blackheath in the Blue Mountains (3500 feet) in November.

72. *Eul. Zophoëssa*, n. sp.

Minor, alis ant. fuscis, punctis disci tribus, macula costae post medium parva, strigaque postica flexuosa saturatioribus; post. saturate griseis.

♂. 15½ mm. Head fuscous, mixed with whitish-ochreous. Palpi dark fuscous, second joint whitish-ochreous internally and at extreme apex, apex of terminal joint whitish-ochreous. Antennæ dark fuscous. Thorax dark fuscous, becoming ochreous posteriorly. Abdomen dark fuscous. Anterior and middle legs dark fuscous, tarsi whitish-ochreous beneath; posterior legs dark grey, apex of tibiæ and tarsal joints whitish-ochreous. Forewings somewhat dilated, costa gently arched, apex rounded, hindmargin obliquely rounded; fuscous, slightly reddish-tinged, basal $\frac{3}{5}$ irregularly mixed and suffused with whitish-ochreous, and thinly irrorated with dark fuscous, hindmargin rather broadly suffused with dark fuscous; a small dark fuscous spot at base of costa, and another at base of inner margin; a small dark fuscous spot in disc before middle, a second in disc beyond middle, and a third almost directly beneath first on fold; first and second connected by a clear whitish-ochreous line, beneath which is a fourth similar spot between them; a small dark fuscous spot on costa at $\frac{3}{5}$, its apex suffusedly confluent with second discal spot; a very indistinct suffused strongly curved dark fuscous line from $\frac{3}{4}$ of costa to anal angle, beneath closely approximating to hindmargin: cilia dark fuscous-grey, mixed with whitish-ochreous. Hindwings dark grey; cilia grey, with a dark grey line near base.

A very distinct species, not approaching near to any other, but in general appearance recalling some species of *Phloeopola.*

One specimen taken at Wellington, New Zealand, in January.

73. *Eul. melesella*, Newm.

(*Depressaria melesella*, Newm., Trans., Ent. Soc. Lond., Vol. iii., N.S., 291.)

Media, alis ant. dilute ochreis, venis obscure fusco-lineatis, punctis disci tribus serieque punctorum postica flexuosa nigris; post. dilute griseis.

♂. 21 mm. Head, palpi, antennæ, thorax, and abdomen whitish-ochreous, slightly suffused with brownish. Legs whitish-ochreous, anterior tibiæ and tarsi suffused above with grey. Forewings strongly dilated posteriorly, costa slightly arched, apex rounded, hindmargin obliquely rounded, whitish-ochreous, all veins indicated by suffused ochreous lines, more or less mixed with dark fuscous scales, especially towards base of subcostal; a dark fuscous dot in disc before middle, a second rather larger in disc beyond middle, and a third almost directly beneath first on fold; a row of tolerably well-defined transversely elongate dark fuscous disconnected dots, proceeding from middle of costa almost parallel and very near to costa, opposite apex sharply indented inwards, almost touching hindmargin beneath apex, thence very close and parallel to hindmargin, continued to middle of inner margin; a suffused dark fuscous hindmarginal line: cilia whitish-ochreous, towards tips whitish, mixed with dark fuscous towards base. Hindwings pale whitish-grey; cilia grey-whitish, with a faint grey line near base.

Markedly characterised by the strongly dilated forewings, and peculiar form of the posterior line.

Common round Melbourne, and also at Hobart, Tasmania, in January. Newman's description is very inadequate, but I do not know any other species to which it could refer.

74. *Eul. episema*, n, sp.

Minor, alis ant. dilute ochreo-griseis, nigro-sparsis, fascia angusta prope basim, macula disci ante medium transversa, altera post medium breviore, maculis costae posticis quattuor serieque marginis postici nigris; post. griseis.

♂. 18 mm. Head whitish-ochreous, with a dark fuscous spot on forehead. Palpi ochreous-white, second joint suffused with dark fuscous on basal $\frac{2}{3}$ externally. Antennæ ochreous-white, becoming black towards base. Thorax pale ochreous-grey, suffused with blackish towards middle of anterior margin. Abdomen whitish-grey, anal tuft ochreous-tinged. Anterior and middle leg dark fuscous, with whitish rings at apex of joints; posterior legs ochreous-whitish, tarsal joints greyish towards base. Forewings moderate, rather dilated, costa gently arched, apex rounded, hindmargin obliquely rounded; pale ochreous-grey, with scattered black scales; a slender black transverse fascia very near base; a slender black transverse bar in disc at $\frac{1}{3}$, extending across median third; a small transverse oblong black spot in disc at $\frac{2}{3}$, connected with anal angle by a dark grey suffused streak; four small inwardly oblique subquadrate blackish spots on costa between middle and apex; a suffused dark grey roundish spot on disc at $\frac{5}{6}$; a hindmarginal row of large ill-defined blackish dots: cilia with basal half pale ochreous-grey mixed with blackish, apical half ochreous-whitish. Hindwings grey, lighter towards base; cilia grey-whitish.

Allied to *E. convictella*, but differing widely in the sharply-defined black transverse and marginal markings; the fusion of the two anterior discal dots into an oblong bar is a striking characteristic.

One specimen received from Mr. E. Guest, taken on the Mount Lofty Range, South Australia, where he states it to be rather common.

75. *Eul. convictella*, Walk.

(*Depressaria convictella*, Walk., Brit. Mus. Cat. 566).

Minor, alis ant. ochreo-griseis, nigro-sparsis, punctis disci tribus (tertio duplici) serieque punctorum postica flexuosa nigris; post. griseis.

♂ ♀. 15–18 mm. Head and palpi ochreous-whitish, base of second joint suffused with dark fuscous, terminal joint anteriorly dark fuscous towards apex. Antennæ dark fuscous. Thorax ochreous-grey, anteriorly suffused with fuscous, anterior margin blackish. Abdomen light ochreous-grey. Anterior and middle legs dark grey, tarsal joints with whitish apical rings; posterior legs grey-whitish. Forewings rather strongly dilated, costa moderately arched, apex rounded, hindmargin oblique, strongly rounded; rather light brownish-grey, with a few scattered blackish scales; extreme costal edge from near base to apex whitish-yellowish; a blackish dot in disc before middle, a second, transverse and obscurely double, in disc beyond middle, and a third almost directly beneath first on fold; the second is sometimes connected with anal angle by a cloudy grey streak; a row of tolerably well-defined disconnected transverse blackish dots from costa about middle, almost parallel and very near to costa, opposite apex indented inwards, almost touching hindmargin beneath apex, and continued thence, very close to hindmargin, to inner margin a little before anal angle: cilia light ochreous-grey, more whitish-grey towards tips. Hindwings grey; cilia grey-whitish, with a faint grey line near base.

This and the three following species are closely allied, and are nearly identical in size and form; *E. convictella* differs from all in its brownish-grey forewings.

Very common round Sydney, and also at Brisbane, frequenting *Kunzea capitata*, from November to January.

76. *Eul. exanimis*, n. sp.

Minor, alis ant. ochreo-albidis, punctis disci tribus, ♀ etiam serie punctorum postica flexuosa saturate fuscis, saepe obsoletis ; post. griseis ; humeris nigris.

♂ ♀. 15–18 mm. Head and palpi white, second joint suffused with fuscous-grey towards base, terminal joint anteriorly dark fuscous towards apex. Antennæ dark fuscous, more whitish towards apex. Thorax whitish, with a dark fuscous spot on each shoulder, sometimes connected in middle. Abdomen ochreous-whitish. Anterior and middle legs grey, beneath white ; posterior legs ochreous-whitish. Forewings rather strongly dilated, in female more elongate, costa moderately arched, apex rounded ; hindmargin oblique, strongly rounded ; whitish, slightly ochreous-tinged ; a dark fuscous dot in disc before middle, often obsolete ; a second, larger and generally distinct, sometimes double, in disc beyond middle : a third almost directly beneath first on fold, often obsolete ; sometimes a few dark grey scales near hind-margin, faintly indicating the transverse line ; in female a distinct row of dark grey dots parallel and very near to hindmargin, and an obscure greyish suffusion between second discal dot and anal angle, sometimes obsolete ; cilia white, towards base faintly ochreous-tinged. Hindwings grey, lighter at base ; cilia whitish, with a cloudy grey line near base.

This and the following species are readily distinguished from *E. convictella* and *E. pantelella* by their ochreous-whitish fore-wings and white heads ; *E. exanimis* is best separated from *E. pallidella* by the blackish shoulders, but differs also in the usually more distinct discal dots, and the greyer hindwings.

Common round Sydney and Melbourne, from November to January.

77. *Eul. pallidella*, n. sp.

Minor, alis ant. ochreo-albidis, ♀ fusco-sparsis ; post. albido-griseis ; humeris ochreo-fuscis.

♂ ♀. 15–18 mm. Head and palpi white, second joint and apex of terminal joint suffused with fuscous anteriorly. Antennæ of male white, of female grey. Thorax white, shoulders suffusedly brownish. Abdomen ochreous-white. Anterior and middle legs grey. posterior legs whitish. Forewings moderately dilated, in female more elongate, costa moderately arched, apex rounded, hindmargin obliquely rounded ; ochreous-white ; the three discal dots rarely faintly indicated; in female an obscure greyish suffusion between the veins, more or less distinct ; rarely the transverse line indicated by a few dark grey scales near hindmargin : cilia ochreous-white. Hindwings ochreous-whitish, suffused with grey on posterior half ; cilia ochreous-white.

Closely allied to *E. exanimis*, from which it differs in having the shoulders marked only with a suffused ochreous-brown spot, the discal dots usually quite absent, even in the female, and the hindwings paler and more whitish towards base.

Common round Brisbane in September.

78. *Eul. pantelella*, n. sp.

Minor, alis ant. ochreo-griseis, sericeis, costa ciliisque dilute ochreis, ♀ interdum punctis disci tribus serieque postica flexuosa saturate fuscis ; post. saturate griseis.

♂ ♀. 15–17 mm. Head whitish-ochreous, more yellowish on crown. Palpi whitish-ochreous, second joint and apex of terminal joint suffused anteriorly with dark fuscous. Antennæ dark fuscous. Thorax grey, sprinkled with whitish-ochreous. Abdomen whitish-ochreous, greyish towards base, more yellowish at apex. Anterior and middle legs dark grey, tarsi with slender obscure whitish rings at apex of joints ; posterior legs whitish-ochreous. Forewings rather strongly dilated, costa slightly arched, apex rounded, hindmargin oblique, strongly rounded ; uniform glossy grey, thickly irrorated with pale ochreous ; costal edge suffusedly pale yellowish-ochreous, extreme costal edge at base dark fuscous;

in female sometimes the usual discal dots and posterior series of dots distinct, dark fuscous, but usually these are wholly absent: cilia pale yellowish-ochreous, somewhat mixed with grey at base, towards tips whitish. Hindwings rather dark grey; cilia whitish-ochreous, with a faint grey line near base.

Nearly allied to *E. convictella*, but separable by the glossy forewings and absence of any fuscous tinge, the clear ochreous cilia, the usual absence of the discal and posterior dots, the darker hindwings and yellower head.

Not uncommon near Parramatta in November and January, certainly frequenting *Acacia decurrens*.

79. *Eul. leptobela*, n. sp.

Minor, alis ant. griseis, margine costali albida, punctis disci tribus serieque punctorum postica flexuosa nigris; post. dilute griseis.

♂. 16 mm. Head, palpi, antennæ, and thorax glossy grey. Abdomen grey-whitish, posteriorly ochreous-tinged. Anterior and middle legs dark grey; posterior legs ochreous-whitish, more ochreous beneath. Forewings rather strongly dilated, costa gently arched, apex rounded, hindmargin oblique, strongly rounded; glossy grey; costal edge slenderly ochreous-whitish from $\frac{1}{4}$ nearly to apex; a conspicuous black dot in disc before middle, a second rather larger in disc beyond middle, and a third almost directly beneath first on fold; a row of irregular somewhat crescentic blackish dots from middle of costa very obliquely outwards to beneath apex, near costa partially obsolete, afterwards conspicuous, dentate inwards opposite apex, thence continued, near and almost parallel to hindmargin, to inner margin at $\frac{3}{4}$: cilia glossy grey, towards tips whitish-grey. Hindwings light grey, rather lighter towards base; cilia grey-whitish.

Recognisable by its uniform glossy grey colour and whitish costal edge; from *E. paurogramma*, which it nearly resembles in superficial appearance, it may be known by the grey head.

One specimen taken at Blackheath in the Blue Mountains (3,500 feet) in February.

80. *Eul. puellaris*, n. sp.

Minor, alis ant. roseo-albidis, postice griseo-sparsis, punctis disci tribus serieque postica obsoleta saturate griseis; post. griseis, basim versus albidis.

♂. 17 mm. Head and antennæ ochreous-whitish. Palpi ochreous-whitish, second joint fuscous-grey externally except towards apex, terminal joint dark fuscous anteriorly. (Thorax defaced.) Abdomen light ochreous, at base whitish. Anterior and middle legs fuscous-grey, posterior legs ochreous-whitish. Forewings oblong, not dilated, costa gently arched near base, apex roundpointed, hindmargin straight, rather strongly oblique; pale whitish-ochreons, irregularly suffused with pale carmine-pink, especially towards disc, and with a few scattered dark grey scales; costal edge narrowly ochreous-white; a dark grey ill-defined dot in disc before middle, a second, rather larger and more conspicuous, in disc beyond middle, and a third slightly beyond first on fold; an indistinct cloudy grey suffusion towards hindmargin and apex, especially between the veins: cilia whitish-ochreous, mixed with pinkish, towards tips more whitish. Hindwings grey, ochreous-tinged, suffused with ochreous-whitish except towards apex; cilia ochreous-whitish.

This and the next species are distinguished from all the preceding by their hardly noticeably dilated forewings and more strongly oblique hindmargin. They are very closely allied; this species may be distinguished by the more pronounced rosy suffusion, the more ochreous-whitish hindwings, and the head not greyish.

One specimen sent by Mr. G. Barnard from Coomooboolaroo, near Duaringa, Queensland.

81. *Eul. achalinella*, n. sp.

Minor, alis ant. albido-ochreis, interdum vix roseis griseisve, punctis disci tribus nigris; post. griseis.

♂ ♀. 15–16½ mm. Head ochreous-whitish, suffused with grey on crown. Palpi dark fuscous, second joint whitish at apex and internally, terminal joint whitish posteriorly. Antennæ grey. Thorax whitish-ochreous, sometimes suffused with grey. Abdomen whitish-ochreous, more ochreous posteriorly. Anterior and middle legs fuscous-grey, posterior legs whitish-ochreous. Forewings somewhat dilated, costa gently arched, apex almost acute, hindmargin straight, very oblique; whitish-ochreous or whitish-yellowish, often faintly and irregularly suffused with pale pinkish or sometimes greyish; a conspicuous blackish dot in disc before middle, a second in disc beyond middle, and a third, smaller and less distinct, rather obliquely beyond first on fold; sometimes a few scattered blackish scales tending to form a bent transverse line midway between second dot and apex, generally obsolete: in female a row of ill-defined dark grey dots on hindmargin; cilia whitish-ochreous, towards tips paler. Hindwings grey; cilia grey-whitish, with a cloudy grey line near base.

Closely allied to the preceding, but hardly perceptibly rosy-tinged, the hindwings nearly uniform fuscous-grey, and the head partially suffused with grey.

Common round Sydney and in the Shoalhaven district, New South Wales, in January and February; also at Melbourne, and in the neighbourhood of Duaringa, Queensland.

82. *Eul. triferella*, Walk.

(*Oecophora triferella*, Walk., Brit. Mus. Cat., 684.)

Parva, alis ant. canis, basi nigra, fascia media alteraque postica arcuata latioribus fuscis; post. griseis.

♂ ♀. 11–14½ mm. Head and palpi white, basal half of second joint dark fuscous. Antennæ whitish. Thorax blackish-fuscous, with a white anterior spot. Abdomen whitish-ochreous, towards base more whitish. Anterior legs dark grey; middle tibiæ ochreous-grey, tarsi whitish-ochreous suffused with grey towards base; posterior legs whitish-ochreous. Forewings moderately dilated, costa moderately arched, apex rounded, hindmargin almost straight, rather oblique; clear white; base narrowly blackish-fuscous; a moderately broad well-defined fuscous transverse fascia from middle of costa to middle of inner-margin, anterior edge straight, posterior edge concave in middle, dilated towards inner margin; a second fuscous transverse fascia, about as broad, from costa before apex to inner margin before anal angle, anterior edge broadly convexly angulated in disc, posterior edge almost straight, leaving a narrow white hindmarginal streak; a row of cloudy rather dark fuscous dots near hindmargin, sometimes suffused and confluent so as to form an irregular line: cilia white, mixed with fuscous, with two indistinct dark fuscous lines round apex. Hindwings grey; cilia grey-whitish, with a faint darker line near base.

This and the two following species are rather nearly allied, being distinguishable by the white bifasciated forewings. *E. triferella* is smaller than either of the other two and relatively broader-winged, with the markings rather dark dull fuscous and comparatively broader.

Not uncommon round Sydney and Melbourne in January and March; also at Brisbane and Rosewood, Queensland, in September.

83. *Eul. brachypepla*, n. sp.

Minor, alis ant. canis, basi nigra, macula apicis, fascia ante medium alteraque postica arcuata angustis ochreo-fuscis; post. albido-griseis.

♂ ♀. 12–15½ mm. Head and palpi white, basal ⅔ of second joint, and extreme apex of terminal joint dark fuscous. Antennæ white, annulated above with fuscous. Thorax white, with a small dark fuscous lateral spot. Abdomen whitish, posteriorly ochreous-tinged. Anterior legs dark fuscous; middle legs grey, yellowish-tinged; posterior legs whitish-ochreous, beneath yellowish. Forewings hardly dilated, costa gently arched, apex rounded, hindmargin obliquely rounded; clear white; base narrowly blackish-fuscous; a narrow brown or ochreous-brown tolerably straight transverse fascia from ⅖ of costa to ⅖ of inner margin, generally abruptly dilated on inner margin, sometimes slender and not distinctly reaching costa; a slightly broader inwardly curved brown or ochreous-brown fascia from ¾ of costa to inner margin slightly before anal angle; an ill-defined ochreous-brown line from upper extremity of this fascia to anal angle, faintest at extremities; a small apical brown spot, produced along upper half of hindmargin, ill-defined: cilia white, towards base slightly ochreous-tinged, mixed with fuscous at apex and anal angle. Hindwings light grey, more whitish-ochreous towards base, cilia ochreous-whitish.

Somewhat larger than *E. triferella*, the fasciæ narrower and more ochreous, a distinct costal spot, and the hindwings lighter.

Common at Brisbane in September, and also taken near Sydney in December and February.

84. *Eul. epicausta*, n. sp.

Minor, alis ant. canis, basi, fascia ante medium alteraque postica arcuata modicis ochreo-fuscis; post. griseis.

♂. 16 mm. Head and palpi white, basal half of second joint dark fuscous. Antennæ white, annulated above with fuscous. Thorax white. Abdomen ochreous. Anterior legs dark fuscous; middle legs yellowish-grey; posterior legs whitish-ochreous, beneath ochreous-yellow. Forewings hardly dilated, costa

slightly arched, apex rounded, hindmargin obliquely rounded; clear white; base narrowly dark ochreous-fuscous; a rather narrow brownish-ochreous fascia from $\frac{2}{5}$ of costa to $\frac{2}{5}$ of inner margin, considerably dilated on inner margin, both edges rather concave; an ochreous-brown fascia, about as broad, from costa a little before apex to inner margin just before anal angle, bent inwards in middle, the anterior angle of the bend emitting a cloudy bent brownish-ochreous line towards costa at $\frac{3}{5}$, hardly reaching it; an irregular thick ochreous-fuscous line alond hindmargin from apex to anal angle; cilia whitish, basal half dark fuscous mixed with whitish. Hindwings grey tinged with ochreous; cilia whitish-ochreous, with a cloudy grey line near base.

Allied to *E. brachypepla*, but longer-winged, the thorax wholly white, the basal spot more ochreous, the fasciæ somewhat broader and the position of the second different.

One specimed taken at Helidon, Queensland, in September.

85. *Eul. chlorella*, n. sp.

Minor, alis ant. albido-ochreis flavidisve, costæ basi, punctis disci, quinque, strigulaque ante-apicali obliqua nigris, ciliis ochreo-flavis; post. griseis.

♂ ♀. 15–20 mm. Head ochreous-yellow. Palpi pale ochreous, second joint externally dark fuscous except at apex. Antennæ whitish-ochreous, obscurely annulated with grey. Thorax whitish-ochreous, anteriorly suffused with ochreous-yellow, shoulders blackish-fuscous. Abdomen whitish-ochreous, more yellowish posteriorly. Anterior and middle legs dark fuscous-grey, apex of joints obscurely whitish-ochreous; posterior legs whitish-ochreous. Forewings not dilated, costa moderately arched, apex round-pointed, hindmargin obliquely rounded; whitish-ochreous, costal edge narrowly pale ochreous-yellow, sometimes wholly suffused with ochreous-yellow; costal edge dark fuscous at base;

a blackish dot in disc before middle, a second almost directly beneath it on fold, a third obliquely beyond and above first, a fourth in disc beyond middle, and a fifth immediately beneath fourth; a short inwardly oblique dark fuscous streak from costa a little before apex, from lower extremity of which proceeds a strongly outwards-curved line of dark fuscous scales, sometimes distinct but often obsolete, to innner margin a little before anal angle: cilia pale ochreous-yellow, becoming whitish-ochreous towards tips. Hindwings grey, darker towards apex; cilia ochreous-whitish, with a very faint grey line near base.

Not to be confounded with any other species of the genus.

Common near Sydney from October to December, appearing to frequent *Kunzea capitata*.

86. *Eul. transversella*, Walk.

(*Cryptolechia transversella*, Walk., Brit. Mus. Cat., 763.)

Minor, alis ant. albis, griseo-sparsis, fascia prope basim angusta, triangulo costæ medio, punctis disci quinque, serie punctorum postica e strigula ante-apicali oriente, alteraque marginis postici nigris; post. griseis.

♂. 17–19 mm. Head ochreous-white. Palpi white, second joint dark fuscous except at apex and internally, apical third of terminal joint dark fuscous. Antennæ whitish, annulated with dark grey. Thorax white, mixed with dark fuscous on shoulders. Abdomen ochreous-whitish, anal tuft pale ochreous. Anterior and middle legs dark fuscous-grey, apex of joints obscurely ochreous-whitish; posterior legs ochreous-whitish. Forewings not dilated, costa gently arched, apex round-pointed, hindmargin oblique, slightly rounded; white, towards inner and hindmargins faintly suffused with greyish, and with a few scattered dark fuscous scales; a narrow blackish transverse fascia very close to base, dilated on costa; a flattened triangular blackish-fuscous blotch extending along central third of costa, reaching $\frac{1}{3}$ across

wing; a blackish-fuscous dot in disc at $\frac{1}{3}$, a second rather obliquely beyond it on fold, a third confluent with apex of costal blotch, a fourth in disc at $\frac{2}{3}$, and a fifth, indistinctly double, a little below fourth; a short inwardly oblique blackish-fuscous streak from costa a little before apex, from lower extremity of which proceeds a strongly outwards-curved well-defined row of almost confluent blackish-fuscouo dots to inner margin a little before anal angle; a row of dark fuscous dots along hindmargin and apical third of costa: cilia ochreous-whitish, with an indistinct central row of grey dots. Hindwings grey, towards base ochreous-tinged; cilia dull whitish-ochreous.

A very distinct species.

Not uncommon at Sydney and Newcastle, from October to December, generally at rest on fences.

87. *Eul. variegata*, n. sp.

Media, alis ant. canis, vitta costæ antica, altera dorsi media, fascia postica angusta, punctis disci quinque, serie postica suffusa e macula apicis oriente, alteraque marginis postici saturate fuscis; post. saturate griseis.

♂ ♀. 17½–21 mm. Head white. Palpi white, apex of terminal joint, and second joint externally except at apex dark fuscous. Antennæ dark fuscous. beneath whitish. Thorax dark fuscous, with a square white spot on back extending to anterior margin. Abdomen grey, margins of segments ochreous-whitish, anal tuft of male ochreous-yellow. Anterior legs dark fuscous; middle legs dark grey, apex of joints suffusedly ochreous-whitish; posterior legs whitish-yellow. Forewings elongate, not dilated, costa moderately arched, apex round-pointed, hindmargin very oblique, slightly rounded; white, with a few scattered fuscous scales; a broad dark fuscous streak along costa from base to $\frac{2}{5}$, its extremity suffused; a thick cloudy dark fuscous streak along inner margin from $\frac{1}{4}$ to $\frac{3}{4}$, attenuated at extremities, sometimes

almost obsolete; a small round dark fuscous spot in disc before middle, a second rather obliquely beyond it on fold, a third in disc below middle, fourth and fifth on posterior fascia; a short thick inwardly oblique dark fuscous streak from costa at $\frac{3}{5}$, from middle of posterior edge of which proceeds a narrow straight rather irregular-edged dark fuscous transverse fascia to anal angle, rather dilated beneath; a small triangular dark fuscous blotch on apical sixth of costa, directed obliquely inwards, lower margin rather suffused, emitting from its apex a strongly outwards-curved dark fuscous line to anal angle, at first thick, beneath more slender and interrupted; a row of dark fuscous dots along hindmargin, sometimes partially confluent: cilia ochreous-whitish, mixed with dark fuscous at apex and anal angle, and with an interrupted cloudy dark fuscous central line, sometimes obsolete. Hindwings rather dark grey, towards base slightly ochreous-tinged: cilia ochreous-whitish, with a faint grey line near base.

A conspicuous species, nearly allied to the following, but easily recognised by the fuscous colour and distinctness of the markings.

Common near Sydney from December to February.

88. *Eul. hemiphanes*, n. sp.

Media, alis ant. albis, griseo-sparsis, vitta costæ antica, altera dorsi media, macula costæ postica obliqua, altera anguli analis, lineaque postica e macula apicis oriente saturate griseis, punctis disci quinque nigris; post. saturate griseis.

♂. 19 mm. Head white. Palpi dark fuscous, terminal joint and apex of second white. Antennæ dark grey. Thorax dark fuscous-grey, with a suffused white central spot. Abdomen grey. Anterior and middle legs dark fuscous, apex of joints very obscurely whitish; posterior legs whitish-grey. Forewings elongate, not dilated, costa moderately arched, apex round-pointed, hindmargin very oblique, slightly rounded; white,

irregularly irrorated with grey; costa suffused with dark grey towards base; a suffused dark grey streak along inner margin from $\frac{1}{4}$ to $\frac{3}{4}$; a small round dark fuscous spot in disc before middle, a second directly beneath it on fold, a third in disc above middle, a fourth transversely double in disc beyond middle, and a fifth rather below and before fourth; a cloudy dark grey inwardly oblique spot on costa at $\frac{2}{3}$; a similar spot on anal angle; a tolerably well-defined inwardly oblique dark grey apical spot, emitting a suffused dark grey curved line to anal angle: cilia whitish-grey, tips paler, with a suffused dark grey line near base. Hindwings grey, darker towards apex; cilia grey, with a darker basal line.

Allied to *E. variegata*, but all the markings (except discal dots) are grey instead of fuscous, and much more suffused, the posterior costal and anal spots do not unite to form a complete fascia, and the posterior legs and anal tuft are not yellowish.

One specimen taken at Launceston, Tasmania in January.

89. *Eul. leucopelta*, n. sp.

Media, alis ant. saturate fuscis, triangulo magno ad dorsi basim, macula obscura costæ media, altera postica, tertiaque anguli analis albis; post. ochreo-flavis, ciliis griseis.

♂. 19 mm. Head ochreous-yellow. Palpi dark fuscous, posterior edge obscurely whitish. Antennæ dark fuscous. Thorax dark fuscous. Abdomen yellowish-grey, segmental margins and anal tuft ochreous-yellow. Anterior and middle legs dark fuscous; posterior legs pale ochreous-yellow. Forewings elongate, not dilated, costa moderately arched, apex round-pointed, hindmargin very oblique, slightly rounded; dark fuscous, darkest towards costa; a well-defined triangular white blotch towards base, resting on basal third of inner margin, its apex obtuse, reaching to disc at $\frac{2}{5}$ from base, followed by two small indistinct transversely placed dark fuscous spots, round which the ground-colour is

lighter and mixed with whitish, a short cloudy inwardly oblique whitish streak from costa slightly beyond middle, almost connected with apex of basal blotch ; a small irregular ill-defined whitish spot above anal angle, containiug a dark fuscous dot near its anterior margin, and connected with anal angle by a short cloudy whitish streak ; a small inwardly oblique ill-defined white spot on costa at $\frac{3}{4}$; one or two whitish scales near hindmargin in middle, and faint indications of a darker fuscous curved transverse line near hindmargin : cilia dark fuscous-grey, mixed with whitish at base, and with an indistinct central row of darker dots. Hindwings uniform ochreous-yellow ; cilia dark fuscous-grey.

A conspicuonsly distinct species.

One specimem taken in March in a railway carriage after descending the mountains by night from Mittagong to Sydner ; it may probably have entered the carriage near Mittagong.

90. *Eul. poecilella*, n. sp.

Minor, alis ant. saturate ochreo-flavis, vitta costæ dimidium superante, altera dorsi post medium dilatata, fascia antica angusta, altera postica latiore cum vitta costæ conjuncta saturate fuscis ; post. saturate fuscis.

♂. ♀ 16–19 mm. Head deep yellow. Palpi dark fuscous, above yellow. Antennæ dark fuscous. Thorax dark fuscous, posteriorly paler, with a small yellow lateral spot. Abdomen fuscous-grey, segmental margins and anal tuft deep yellow. Anterior and middle legs dark fuscous, beneath yellowish; posterior legs ochreous-yellow. Forewings elongate, hardly dilated, costa gently arched, apex round-pointed, hindmargin very oblique, slightly rounded ; deep ochreous-yellow, with well-defined dark fuscous markings ; a moderately broad streak along costa from base to $\frac{2}{3}$, leaving costal edge very narrowly yellow except near base ; a moderately broad streak along inner margin from base to $\frac{2}{3}$, attenuated at base, posterior extremity dilated

into an irregular spot; a rather narrow oblique transverse streak from middle of costal to middle of dorsal streak, bent convexly outwards; a straight rather narrow transverse streak from near apex of costal streak to anal angle: a rather broad straight band from costa before apex to lower half of second transverse streak, leaving a narrow yellow streak along hindmargin: cilia dark fuscous. Hindwings dark fuscous-grey; cilia dark grey, extreme base ochreousryellow.

A handsome insect, not to be confused with any other.

Not uncommon round Parramatta, and near Melbourne, frequenting *Acacia decurrens* and flying readily in the sun during March; I have also seen a specimen from Tasmania.

91. *Eul. habrophanes*, n. sp.

Minor, alis ant. ♂ ochreo-fuscis, ♀ saturate fuscis, cano-nebulosis, basi cano-maculata vel omnino cana, maculis costæ duabus angustis obliquis tertiaque dorsi postica suffusis canis; post. griseis.

♂. 16 mm. Head ochreous-yellow, face whitish-ochreous. Palpi whitish-ochreous, anteriorly dark fuscous. Antennæ dark grey. Thorax greyish-fuscous, with a small whitish-yellow anterior spot, posterior extremity whitish. Abdomen ochreous-yellow, paler towards base. Anterior and middle legs dark fuscous; posterior legs whitish-ochreous. Forewings elongate, not dilated, costa gently arched, apex round-pointed, hindmargin oblique, slightly rounded; ochreous-fuscous, with ill-defined white markings; a small spot on costa near base; an irregular oblique streak from middle of costa to base of inner margin, dilated beneath, interrupted in disc and on fold; a small roundish spot above fold beyond this, followed by two or three scattered white scales in disc; an inwardly oblique rather narrow streak from costa at $\frac{3}{4}$, and an inwardly oblique streak from inner margin before anal angle, their extremities only separated in disc by a

dark ochreous-fuscous dot; a small spot on middle of hindmargin, and some scattered white scales before it: cilia grey, mixed with whitish-ochreous, with an interrupted dark fuscous line. Hindwings fuscaus-grey; cilia whitish-ochreous-grey, becoming pale yellowish-ochreous at base, and wholly round apex, with a darker grey line near base.

♀. 17 mm. Head white. Palpi white, anteriorly dark fuscous. Thorax dark fuscous, anterior margin and small lateral and posterior spots white. Abdomen whitish-ochreous. Posterior tarsi white, base of joints grey, rest as in male. Forewings as in male, but ground-colour dark fuscous, white markings broader and partially confluent, entire base of wing becoming white, and ground-colour mixed with white scales; cilia white, mixed with dark fuscous at apex and anal angle. Hindwings as in male, but yellowish-ochreous colour in cilia replaced by ochreous-whitish.

Perhaps most allied to *E. leucopelta*, but very different-looking, and with grey hindwings; the sexual differences are curious, and apparently peculiar.

I have a pair taken near Melbourne by Mr. G. H. Raynor.

92. *Eul. lividella*, n. sp.

Minor, alis ant. albido-roseis, marginibus, vitta media birami, fasciis duabus sub costa confluentibus, maculaque apicis obscure ochreo-fuscis, nigro-sparsis; post. griseis.

♂. 14½ mm. Head ochreous-fuscous mixed with fuscous-grey. Palpi dark fuscous, internally and posteriorly ochreous-whitish. Antennæ dark fuscous. Thorax ochreous-fuscous, shoulders and centre of back dark fuscous. Abdomen fuscous-grey, segmental margins and anal tuft whitish-ochreous. Anterior and middle legs fuscous-grey mixed with ochreous-whitish; (posterior legs wanting.) Forewings elongate, hardly dilated, costa gently arched, apex almost acutely pointed, hindmargin very oblique, slightly rounded; dull light pinkish, almost whitish in disc;

markings very suffused, ochreous-fuscous irrorated with black; a slender central longitudinal streak from base, separating before middle into two attenuated branches, upper branch hardly reaching hindmargin, lower to anal angle; a very indistinct streak along costa, and another along inner margin, more distinct towards base; an obscure slender fascia from middle of costa to $\frac{1}{3}$ of inner margin, more distinct beneath; a similar fascia from origin of first on costa to anal angle; an ill-defined suffusion towards apex and hindmargin; a hindmarginal row of cloudy blackish dots: cilia pale pinkish, mixed with fuscous, tips more whitish. Hindwings rather light grey; cilia whitish-grey, faintly ochreous-tinged.

An obscure-looking species, but not at all closely approaching any other.

I have one specimen taken by Mr. G. H. Raynor on Mount Macedon, Victoria, in December.

93. *Eul. philotherma*, n. sp.

Minor, alis ant. saturate fuscis, punctis disci quinque strigaque postica nigricantibus, macula parva costæ postica alteraque marginis postici obscuris glaucis; post. saturate flavis, margine postico ciliisque nigris.

♂. 17 mm. Head ochreous-yellow. Palpi dark fuscous, terminal joint posteriorly, and apex of second joint whitish-yellow. Antennæ dark fuscous, beneath yellowish. Thorax blackish-fuscous. Abdomen fuscous-grey, segmental margins whitish-yellow. Anterior and middle legs dark fuscous; posterior legs pale ochreous-yellow. tarsi with dark fuscous rings. Forewings elongate, not dilated, costa nearly straight, gently arched before apex, apex round-pointed, hindmargin very oblique, rounded; dark fuscous, rather lighter towards disc: a broad longitudinal space above fold extending from base to $\frac{2}{3}$ scantily strewn with bluish-white scales; an indistinct darker fuscous dot in disc

before middle. a second obliquely beyond it on fold, a third beyond first near costa, and a fourth, indistinctly double in disc beyond middle; a small cloudy bluish-whitish spot on costa at $\frac{3}{4}$, from which proceeds an indi stidct darker fuscous outwardly curved line to anal angle, on its lower portion preceded and followed by scatteree bluish-white scales: cilia dark purplish-grey, mixed with bluish-white scales at base. Hindwings deep orange-yellow, hindmargin very narrowly and apex more broadly suffused with dark fuscous; cilia dark fuscous.

Distinguished from all othor species by the orange-yellow blackish-margined hindwings.

One specimen taken near Sydney in December.

94. *Eul. brontomorpha*, n. sp.

Minor, alis ant. griseis, fusco-sparsis, vitta costæ antica, altera dorsi media, punctis disci quinque, fascia post medium strigaque postica obscuris saturatioribus; post. ochreo-griseis.

♂ ♀. 17–18 mm. Head yellowish-ochreous. Palpi dark fuscous, internally and at apex of second joint ochreous-whitish. Antennæ dark grey. Thorax dark fuscous. Abdomen ochreous-yellowish. Anterior and middle legs dark fuscous; posterior legs ochreous-yellowish. Forewings elongate, not dilated, costa gently arched, apex round-pointed, hindmargin very oblique, rounded; light fuscous-grey, ochreous-tinged, irregularly mixed and suffused with darker; a rather broad cloudy dark fuscous-grey streak along costa from base to middle; a small roundish cloudy dark fuscous-grey spot in disc before middle, a second beneath it on fold, a third very indistinct towards costa in middle, a fourth and fifth close together in disc beyond middle, connected with anal angle by an oblique cloudy streak; a dark fuscous-grey suffusion along inner margin from $\frac{1}{4}$ to $\frac{3}{4}$, confluent with an ill-defined fuscous-grey suffusion of middle of disc; a cloudy dark fuscous-grey spot on costa at $\frac{3}{5}$; a short narrow inwardly oblique

streak from costa at $\frac{5}{6}$, emitting a cloudy, indistinctly interrupted, outwardly curved line to anal angle; a row of cloudy dark fuscous dots along hindmargin: cilia fuscous-grey, mixed with paler. Hindwings brownish-ochreous, thickly irrorated with fuscous-grey; cilia grey.

Ths type of markings approaches nearly to that of *E. variegata* and *E. hemiphanes*, from which however the species differs conspicuously in the ground colour not being white, and in the ochreous hindwings.

Two specimens taken near Sydney in January and March, beaten from *Eucalyptus*.

95. *Eul. calotropha*, n. sp.

Minor, alis ant. dilute griseis, basi, lineis duabus anticis transversis, maculaque postica transversa magna saturate griseis, nigromixtis; post. griseis, basim versus albida-ochreis.

♂ ♀. 14 mm. Head white, on sides mixed with dark fuscous. Palpi with second joint dark fuscous irrorated with white, apex white, terminal joint white with a few dark fuscous scales. Antennæ grey, basal joint white. Thorax anteriorly dark fuscous, posteriorly grey irrorated with white. Abdomen grey, sides whitish-ochreous, anal tuft of male pale ochreous. Anterior legs dark fuscous; middle legs dark fuscous mixed with yellowish, with whitish-yellow rings at apex of joints and in middle of tibiæ; posterior legs whitish-yellow. Forewings moderate, hardly dilated, costa moderately arched, appearing slightly sinuate in middle, apex round-pointed, hindmargin obliquely rounded; grey, densely irrorated with whitish, especially towards middle; extreme costal edge whitish-ochreous from about $\frac{1}{4}$ nearly to apex; base of wing dark fuscous; a cloudy fuscous-grey outwardly bent transverse line near base; a wedge-shaped somewhat oblique dark fuscous streak from inner margin before middle, reaching more than half across wing, its anterior edge irregular, its apex

almost meeting a short oblique fuscous-grey line from costa at $\frac{1}{3}$; a cloudy fuscous-grey dot in disc beyond middle, and a dark fuscous dot below it; a broad cloudy dark fuscous transverse fascia from $\frac{3}{4}$ of costa to anal angle, mixed with blackish on upper half, anterior edge irregular and ill-defined, posterior edge bordered by a sinuate whitish line, beyond which the apical area is mixed with dark fuscous: cilia light grey, irrorated with whitish, at apex and anal angle mixed with blackish-fuscous, beneath anal angle whitish-ochreous. Hindwings whitish-ochreous, apical half in male, two-thirds in female suffused with fuscous-grey; cilia whitish-ochreous, with a grey spot at apex.

A rather elegant species, very distinctly marked.

Three specimens taken at rest on fences in Sydney, in December and January.

96. *Eul. philostaura*, n. sp.

Media, alis anticis griseis, cano nigroque sparsis, fascia costæ antica nebulosa plicam non superante, macula costæ media obscura, punctis disci quinque saepe duplicibus, serie punctorum postica sinuata alteraque marginis postici nigrescentibus; post. fusco-griseis.

♂ ♀. 17–27 mm. Head grey, mixed with ochreous-whitish on face and sides. Palpi whitish, externally more or less mixed with grey. Antennæ whitish, annulated with grey. Thorax fuscous-grey, irrorated with whitish. Abdomen whitish-grey-ochreous. Anterior and middle legs dark grey, with whitish rings at middle and apex of tibiæ, and apex of tarsal joints; posterior legs ochreous-whitish, beneath greyish. Forewings rather elongate, oblong, not dilated, costa slightly arched, more strongly near base, apex rounded, hindmargin very obliquely rounded; light fuscous-grey, coarsely and irregularly irrorated with whitish and dark fuscous; a very irregular short oblique cloudy dark fuscous streak from costa very near base; a cloudy

dark fuscous-grey fascia-like spot from costa at $\frac{1}{4}$, reaching fold, and a small more suffused spot on costa in middle; five small irregular blackish-fuscous spots in disc, each more or less surrounded with whitish; first in disc before middle, oblique, often double, second on fold beneath first, similar, third roundish, in middle towards costa, fourth transverse, in disc beyond middle, indistinctly double, fifth small, below fourth, sometimes touching it; a suffused short inwardly oblique dark fuscous-grey streak from costa at $\frac{3}{4}$, emitting a suffused strongly outwards-curved line to anal angle, more or less interrupted, before lower extremity sinuate; a row of ill-defined dark fuscous elongate dots along hindmargin and apical fourth of costa: cilia light grey mixed with whitish, basal third with ill-defined alternate whitish and dark grey spots. Hindwings grey, ochreous-tinged, rather paler towards base; cilia whitish-grey-ochreous, with a faint grey line near base, tips faintly grey.

This and the four following species are nearly allied; *E. philostaura* is readily known by the forewings being relatively broader towards base, with the costa basally more strongly arched, the ground colour mixed with whitish throughout and therefore appearing lighter, the two darker costal spots, of which the first is produced as far as the fold, and the more ochreous-tinged hindwings; the size is very variable, some specimens being much larger than any of the other species.

Common in Sydney, where however it seems confined to the neighbourhood of gardens, being found at rest on fences, from November to January; also taken at Kiama, New South Wales, and tolerably common in the bush near Brisbane, in September.

97. *Eul. amaura*, n. sp.

Minor, alis ant. brevioribus, saturate griseis, punctis disci quinque strigaque postica obscuris nigris; post. griseis.

♂ ♀. 16–17½ mm. Head, palpi, antennæ, and thorax dark fuscous-grey. Abdomen ochreous-grey. Legs dark grey, tarsal

joints with whitish apical rings, posterior tibiæ ochreous-grey-whitish. Forewings rather short in male, more elongate in female, not dilated, costa moderately arched, apex round-pointed, hindmargin very obliquely rounded ; fuscous-grey, irrorated with light grey and blackish ; an ill-defined dark fuscous dot in disc before middle, a second larger on fold beneath it, a third beneath middle of costa, a fourth and fifth partially confluent transversely placed in disc beyond middle, sometimes a sixth before and beneath fifth, all often obsolete ; a cloudy darker spot on costa beyond middle, generally obsolete ; a short cloudy inwardly oblique dark fuscous-grey streak from costa at $\frac{4}{5}$, emitting an indistinct outwards-curved line to inner margin before anal angle ; sometimes a cloudy dark fuscous-grey streak from fifth discal dot to anal angle ; a row of indistinct dark fuscous-grey dots along hindmargin and apical fifth of costa : cilia grey, mixed with darker and lighter, tips paler. Hindwings fuscous-grey, cilia light fuscous-grey.

Rather shorter and broader-winged than the two following species, to which it is very closely allied, distinguishable by the entire absence of any white scales ; it is also uniformly smaller. I am not however sure that it may not prove to be a summer generation of *E. adoxella*.

Not uncommon round Sydney, from November to February.

98. *Eul. dolosella*, Walk.

(*Psecadia dolosella*, Walk., Brit. Mus. Cat., 539.)

Minor, alis ant. griseis, vitta media angusta obscura alba, punctis disci quinque nigris ; post. dilute griseis.

♂. 16½-19½ mm. Head, palpi, antennæ, and thorax fuscous-grey. Abdomen whitish-ochreous. Anterior and middle legs dark grey, tarsal joints with ochreous-whitish apical rings ; posterior legs whitish-ochreous. Forewings elongate, not dilated, costa gently arched, apex round-pointed, hindmargin very

obliquely rounded; fuscous-grey, finely irrorated with dark fuscous and grey-whitish; a central longitudinal streak of whitish scales from base almost to apex, posteriorly becoming obsolete; an indistinct dark fuscous dot beneath this before middle, a second above it in middle, a third above it beyond middle, a fourth below third, sometimes a fifth on fold before first, all often obsolete; cilia light fuscous-grey mixed with grey-whitish. Hindwings grey; cilia ochreous-grey-whitish.

Distinguished readily by the distinct whitish longitudinal streak, and also rather narrower-winged than *E. adoxella*, lighter and more uniformly coloured, with the discal dots more obsolete; in *E. adoxella* the upper portion of the disc is often suffusedly whitish, but does not form a distinct streak.

Five specimens taken near Sydney in February.

99. *Eul. adoxella*, n. sp.

Media, alis ant. elongatis, saturate griseis, disco saepius cano-sparso, punctis disci sex strigaque postica nigris; post. griseis.

♂ ♀. 19-21 mm. Head, palpi, antennæ and thorax fuscous-grey. Abdomen whitish-grey-ochreous. Anterior and middle legs dark fuscous-grey, tarsal joints with ochreous-whitish apical rings; posterior legs whitish-ochreous. Forewings moderately elongate, not dilated, costa moderately arched, apex round-pointed hindmargin very obliquely rounded; fuscous-grey, finely irrorated with whitish, sometimes longitudinally suffused with whitish towards disc; six clearly-marked blackish dots in disc, irregularly roundish, sometimes partially surrounded with whitish scales; first in disc before middle, second slightly beyond it on fold, third in middle towards costa, fourth and fifth often confluent, transversely placed in disc beyond middle, sixth near before and beneath fifth; a short ill-defined inwardly oblique dark fuscous streak from costa at $\frac{3}{5}$, emitting an outwards-curved cloudy line to inner margin before anal angle, indistinctly inter-

rupted to form dots, beneath more indistinct and often obsolete; a row of very indistinct often obsolete dark fuscous dots along hindmargin and apical fifth of costa: cilia fuscous-grey, slightly mixed with whitish. Hindwings fuscous-grey, slightly paler towards base; cilia whitish-grey, slightly ochreous-tinged, with a very faint grey line near base.

Usually rather larger than *E. amaura* or *E. dolosella*, with the discal dots much more clearly defined than in either. The obscure grey colouring and type of markings of this group recur in some species of *Nephogenes* and *Philobota*, but both those genera have vein 7 of the forewings terminating beneath the apex.

Common round Sydney and Melbourne in March.

100. *Eul. photinella*, n. sp.

Minor, alis ant. albido-griseis, basi, maculis costæ duabus obscuris,. tertia dorsi, quarta apicis, punctis disci tribus strigaque postica saturate griseis; post. griseis.

♂. 17 mm. Head fuscous-grey mixed with ochreous-whitish, especially on face. Palpi fuscous-grey, base of terminal joint, and extreme apex of second ochreous-whitish. Antennæ fuscous-grey. Thorax fuscous-grey, irrorated with whitish. Abdomen light ochreous-grey, anal tuft whitish-ochreous. Anterior and middle legs dark fuscous-grey, with ochreous-whitish rings at middle and apex of tibiæ, and apex of tarsal joints; posterior legs ochreous-whitish, tarsal joints grey towards base. Forewings moderately elongate, somewhat dilated, costa moderately strongly arched, apex round-pointed, hindmargin very obliquely rounded; light fuscous-grey, irregularly irrorated and suffused with whitish, especially in disc and posteriorly; base of wing very narrowly suffused with dark fuscous; a very ill-defined small dark fuscous-grey spot on costa at $\frac{2}{5}$, and a similar rather larger one on costa slightly beyond middle; a third on inner margin slightly before middle; a tolerably well-defined small roundish dark fuscous spot in disc before middle, a second

obliquely before it on fold, and a third in disc beyond middle; a short inwardly oblique cloudy dark fuscous-grey streak from costa at $\frac{4}{5}$, emitting an irregular outwards-curved line to inner margin before anal angle; apex dark fuscous-grey; cilia whitish, at and above apex suffused with grey, on basal half irregularly mixed with dark fuscous-grey. Hindwings grey; cilia white, with a dark-grey line near base.

Readily known by the cloudy costal and dorsal spots, and the discal dots being reduced to three. It is questionable whether this species is not more directly allied to *E. variegata*, but it is apparently a generalised type with diverse affinity.

One specimen taken at Wellington, New Zealand, January.

101. *Eul paurogramma*, n. sp.

Minor, alis ant. dilute griseis, nigro-sparsis, margine costali ochreo-albida, ad basim nigricante, punctis disci tribus obscuris nigris; post. griseis; capite ochreo-flavo.

♂ ♀. 14½-17 mm. Head ochreous-yellow. Palpi dark fuscous, whitish internally and towards apex of terminal joint. Antennæ grey. Thorax fuscous-grey. Abdomen slaty-grey, each segment with an ochreous-orange oblong spot above, anal tuft ochreous-grey. Legs dark slaty-grey, tarsal joints with slender whitish apical rings, posterior tibiæ ochreous-whitish above. Forewings elongate, not dilated, costa gently arched, apex round-pointed, hindmargin very obliquely rounded; uniform grey, thinly sprinkled with blackish scales; extreme costal edge ochreous-whitish from $\frac{1}{4}$ to apex, towards base blackish; an indistinct blackish dot in disc before middle, a second in disc beyond middle, and a third on fold directly beneath first; cilia light grey, finely irrorated with ochreous-whitish. Hindwings grey; cilia whitish-grey.

Distinguishable at once by the ochreous-yellow head.

Four specimens taken on Mount Wellington, Tasmania, early in February.

102. *Eul. cimmeriella*, n. sp.

Parva, alis ant. saturate griseis, fasciis duabus angustis perobscuris albidis; post. nigrescentibus.

♂. 12 mm. Head, palpi, and thorax dark fuscous, very finely irrorated with whitish. Antennæ grey. Abdomen dark fuscous. Anterior and middle legs dark fuscous, tarsal joints with whitish apical rings; posterior legs grey-whitish. Forewings elongate, not dilated, costa moderately arched, apex acutely pointed, hindmargin slightly sinuate, very oblique; dark fuscous-grey, minutely irrorated with whitish; a very ill-defined slender cloudy whitish transverse fascia from $\frac{1}{3}$ of costa to $\frac{2}{5}$ of inner margin, sharply angulated outwards above middle, posteriorly suffusedly edged with darker fuscous-grey; an indistinct whitish suffusion on costa at $\frac{2}{3}$, and on inner margin before anal angle, seeming to form a paler transverse fascia, followed by darker fuscous-grey; a faintly indicated paler curved transverse line before hindmargin: cilia light grey, finely irrorated with whitish. Hindwings dark fuscous; cilia grey.

An obscure little species, but very different from any other.

One specimen taken near Bowenfels in the Blue Mountains (2,500 feet) in January.

103. *Eul. xylopterella*, Walk.

(*Gelechia xylopterella*, Walk., Brit. Mus. Cat., 650.)

Media, alis ant. canis, griseo-sparsis, vitta media angusta bis interrupta nigricante; post. dilute griseis.

♂ ♀. 18-20. mm. Head, palpi, and thorax whitish, mixed with fuscous-grey. Antennæ whitish-grey. Abdomen ochreous-whitish. Adterior legs fuscous-grey; middle and posterior legs whitish, slightly mixed with fuscous-grey, middle tibiæ fuscous-

grey above. Forewings elongate, not dilated, costa gently arched, apex round-pointed, hindmargin extremely oblique, slightly rounded; white, irregularly mixed with light fuscous-grey; a short linear longitudinal blackish mark at base beneath costa; a narrow central longitudinal blackish streak almost from base to apex, beneath suffusedly fuscous-margined, more or less distinctly broken and interrupted at ⅓ and ⅔, the central interrupted portion tending to terminate in an incompletely defined ocellus at each extremity; cilia whitish, tips mixed with fuscous, basal half more or less distinctly chequered with ill-defined dark fuscous spots. Hindwings rather light grey; cilia grey-whitish, with an indistinct grey line near base.

Differs from all others in the central interrupted blackish streak.

One specimen taken at Sydney in November; a second received from Mr. G. H. Raynor, taken near Melbourne.

104. *Eul. siccella*, Walk.

(*Gelechia siccella*, Walk., Brit. Mus. Cat., 643.)

Media, alis ant. dilute griseis, nigro-conspersis, punctis disc tribus, serie punctorum postica angulata alteraque marginis postici nigris; post. griseis.

♂ ♀. 18-20 mm. Head and thorax fuscous-grey. Palpi whitish, apical half of second segment blackish except a narrow apical ring, terminal joint blackish anteriorly. Antennæ grey-whitish, sometimes distinctly annulated with grey. Abdomen whitish-grey, anal tuft ochreous-whitish. Anterior and middle legs dark fuscous-grey; posterior legs ochreous-whitish. Forewings elongate, not dilated, costa gently arched, more strongly near base, apex blunt-pointed, hindmargin very oblique, slightly rounded; very light grey, coarsely and irregularly irrorated with blackish; a very small blackish spot in disc before middle, a second, larger and more conspicuous, in disc beyond middle, and a third on fold slightly beyond first; sometimes a fourth between

and slightly above first and second; a transverse row of very ill-defined small blackish spots from costa at ⅝ very obliquely outwards nearly to apex, thence very sharply bent and continued very near hindmargin to inner margin before anal angle; a row of indistinct elongate blackish spots along hindmargin and apical third of costa: cilia whitish-grey, with a blackish line, sometimes obsolete. Hindwings light grey, in female slightly darker; cilia whitish-grey, with a very faint darker line.

Recognisable by the very coarse black irroration; allied to the two following, but with the discal dots not transformed into strigulæ.

Common near Sydney, and at Blackheath in the Blue Mountains (3,500 feet), in September and October, at rest on the trunks of fibrous-barked *Eucalypti*.

105. *Eul. grammatica*, n. sp.

Media, alis ant. griseo-albidis, nigro-sparsis, strigula ad costæ basim, aliis disci quinque circulatim dispositis, serie punctorum postica angulata alteraque marginis postici nigris; post. dilute griseis.

♂. 23 mm. Head and thorax grey mixed with white. Palpi with second joint blackish, mixed with whitish towards base, with a white apical ring, terminal joint white, extreme apex blackish. Antennæ whitish, slenderly annulated with grey. Abdomen whitish-grey, anal tuft ochreous-whitish. Anterior and middle legs dark fuscous, tarsal joints with whitish-apical rings; posterior legs ochreous-whitish. Forewings elongate, not dilated, costa gently arched towards base and apex, rest nearly straight, apex almost acute, hindmargin very oblique, almost straight; whitish, irregularly mixed with light fuscous-grey, and with scattered dark fuscous-grey scales; a short blackish very oblique curved linear streak from base of costa, almost meeting first discal spot; a blackish irregular spot in disc at ⅓, and a second on fold obliquely beyond it; an elongate blackish

longitudinal mark towards costa in middle ; a crescentic blackish mark in disc at $\frac{2}{3}$, its lower extremity emitting a short blackish streak towards base ; a small blackish spot on costa beyond middle ; a transverse row of small ill-defined dark grey spots from costa at $\frac{2}{3}$ irregularly and obliquely outwards to beneath apex, thence sharply bent and continued very near hindmargin to inner margin before anal angle ; a row of well-defined blackish dots along hindmargin and apical third of costa : cilia whitish, with a dark grey interrupted line. Hindwings pale grey, with dark grey dots on hindmargin on veins ; cilia grey-whitish, with a very indistinct grey line.

Characterised by the strongly marked irregular partially confluent discal strigulæ.

One specimen at rest on a fence near Sydney in July.

106. *Eul. scopariella*, Walk.

(*Cryptolechia scopariella*, Walk., Brit. Mus. Cat., 765.)

Media, alis ant. griseo-albidis, obscure nigro-venosis. strigula ad costæ basim, annulo disci tenui interrupto, serieque punctorum postica angulata nigris ; post. dilute griseis.

♂ ♀. 23-25 mm. Head and thorax whitish, mixed with dark fuscous. Palpi with second joint rather roughly haired above towards apex ; dark fuscous, apex of second joint white, base whitish, terminal joint white posteriorly. Antennæ whitish. Abdomen grey, anal tuft ochreous-whitish. Anterior and middle legs dark grey, apex of tarsal joints white ; posterior legs whitish. Forewings very elongate, not dilated, costa gently arched, apex round-pointed, hindmargin very oblique, rounded ; whitish, irregularly mixed with light fuscous-grey and dark fuscous ; veins obscurely lined with dark fuscous ; a short linear dark fuscous streak from base beneath costa ; a short linear dark fuscous longitudinal streak in disc before middle, a second above middle, a third longer below middle, and two irregular transversely placed dots beyond middle, all nearly confluent to form

an elliptical ring; a dark fuscous elongate dot on fold below first discal streak; a transverse row of small somewhat wedge-shaped dark fuscous spots from costa at $\frac{3}{5}$ very obliquely outwards to below apex, thence sharply bent and continued near hindmargin to before anal angle; the streaks on veins form elongate dots on margins: cilia whitish, mixed with dark fuscous. Hindwings rather light grey; cilia grey-whitish, with a faint grey line.

Longer winged than *E. grammatica*, the hindmargin more rounded, the veins marked by obscure lines, the discal strigulæ reduced to lines, and the palpi peculiarly haired.

Three specimens taken on *Eucalyptus* trunks near Sydney in April and August.

107. *Eul. perdita*, n. sp.

Minor, alis ant. angustis, nigricantibus, maculis disci plerisque obscuris nigris; post. saturate fuscis.

♂. 16½ mm. Head and thorax blackish-fuscous. Palpi blackish-fuscous, with scattered whitish scales. Antennæ dark fuscous. Abdomen fuscous-grey. Legs dark fuscous, apex of tarsal joints whitish; posterior tibiæ fuscous-grey. Forewings very elongate, very narrow, slightly dilated posteriorly, costa almost straight, gently bent towards base and apex, apex round-pointed, hindmargin very obliquely rounded; pale grey, very densely and coarsely irrorated with black; two round black spots transversely placed in disc before middle, and a third rather beyond and between them, all three confluent; a fourth below middle of costa, a fifth larger in disc beyond middle, and a sixth, larger and more suffused, towards apex; a short ill-defined pale ochreous longitudinal mark on fold near base: cilia pale grey, irrorated with black. Hindwings dark grey, lighter towards base; cilia fuscous-grey.

Immediately known by its narrow wings and blackish colouring.

One specimen taken at rest on a blackened *Eucalyptus* trunk near Sydney in September.